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OS/2 FOR CORPORATE AMERICA

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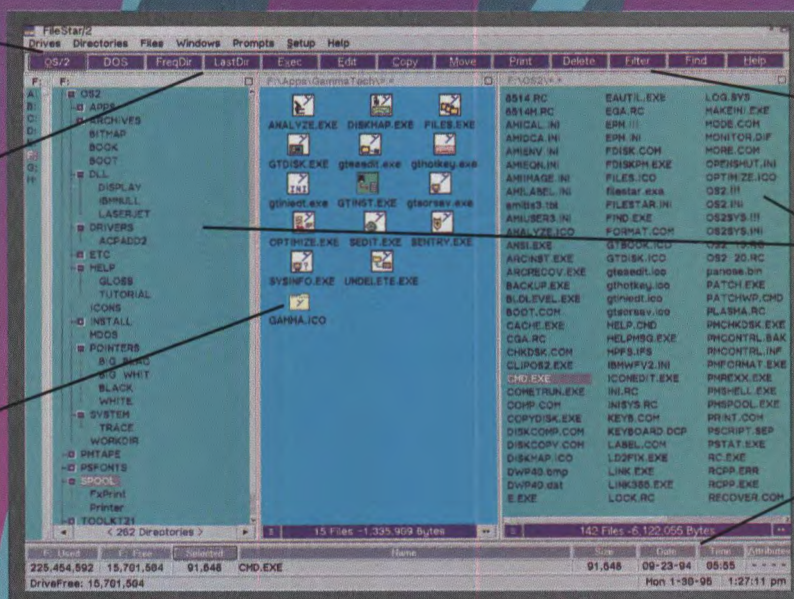
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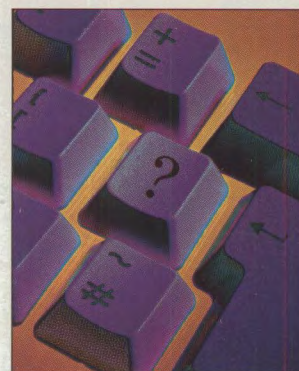
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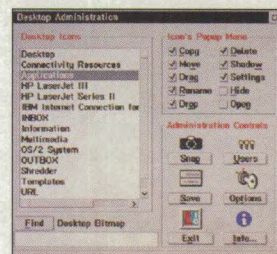
Jerry Pournelle examines APIs and fixes a nasty printer problem.



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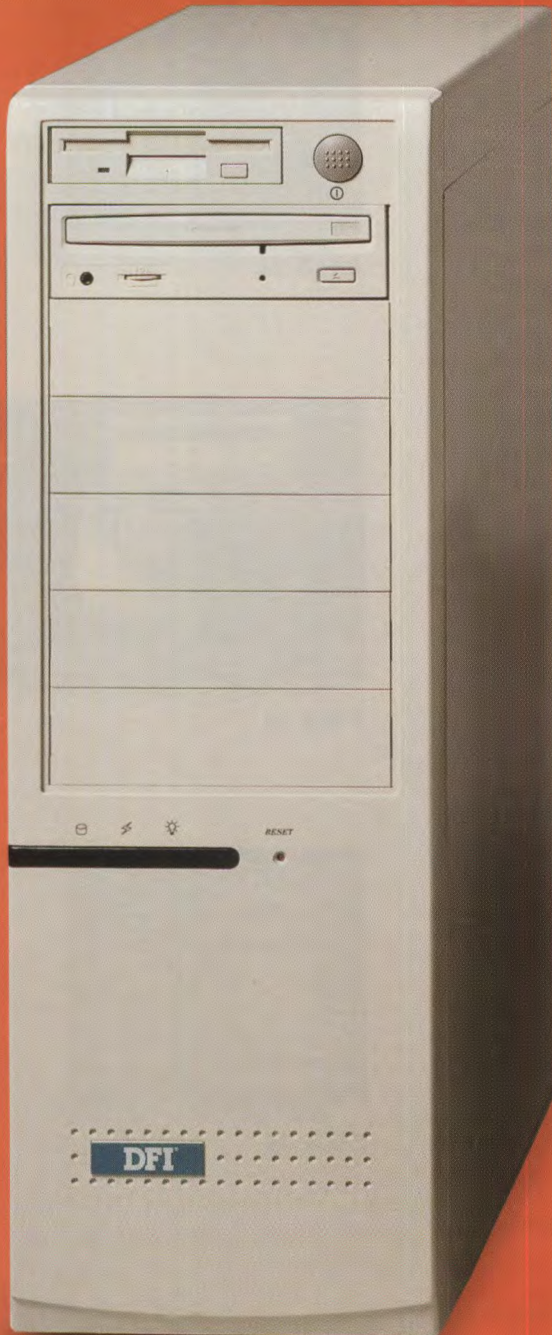
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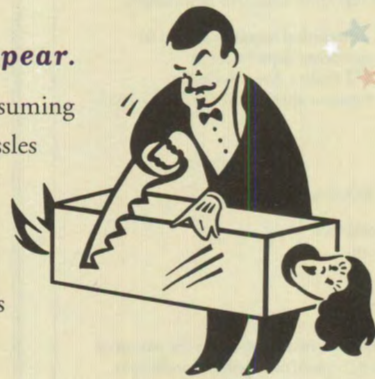
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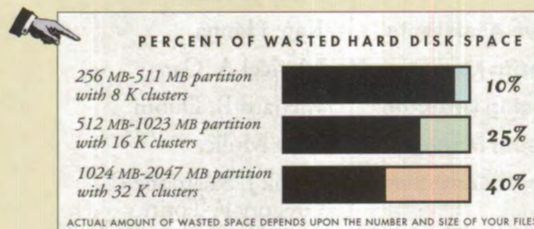
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The Point Has Been Turned

BY EDWIN BLACK

We have passed the turning point for OS/2. That occurred last November and December when PSP sales plummeted dramatically following the multiple whammies of Lou Gerstner's retreat from the OS Wars, PSP's massacre of leading OS/2 stars and star systems (such as Team OS/2, the Boca lab, the book program, Dave Whittle, David Barnes), the decimation of the advertising program and, of course, IBM's transformation of PSP into a shadow of itself, if the division remains at all by presstime.

In this month's Special Report, we offer a variety of opinions on the future of OS/2 from a spectrum of leading OS/2 advocates, analysts and computer journalists. But here's an additional perspective.

I say it's the commercial crime of the century. Never did a product have so much going for it yet fail so miserably. IBM developed the most useful and technologically superior OS on the planet. They made it attractive, cheap, efficient and extraordinarily compatible backwards and forwards. It had the muscle of a legion of volunteer cultic devotees who stood shoulder to shoulder with highly placed decision makers. It matured just as the world lost its fear of computers and gained a fascination for the Internet. Warp enjoyed the advantage of Microsoft's repeated faltering, betrayal of people's trust and delivery of inferior technology, fundamentally handing the market over to IBM. To make it all happen, Armonk budgeted megamillions for Warp promotion and sales.

But what did happen? You remember Bloodhound, the magnificent app that was suffocated by neglect? Well the opposite happened here. IBM saddled Warp with so many misdirected decisions that it killed Warp as effectively as if they had just relabelled the boxes *SearchManager* and stored them in a warehouse.

What happened? Stand and tell us: Estella Haines, what happened to the advertising program? Dan Lautenbach, what happened to the sales figures? Wally Casey, what happened to OS/2 for the Power PC? Send us a universal, all-blanketing, world bom-

barding E-mail and explain what the hell happened.

The silence is deafening. I guess the real issue is where do we go from here? The channels organization is in utter disarray.

SOHO and home efforts are history. But the OS is great, and the apps are exquisite. We can stay with Warp and continue to outperform the rest of the computing world.

What's important now is the truth. That's a rare commodity from a dysfunctional, self-destructive company called IBM. *OS/2 Professional* intends to continue reporting the truth and offer the insights you and your company need to thrive and survive as Warped users. Things have

changed for sure. Warped users are among the most sophisticated users on Earth. They derive most of their technical information about OS/2 from websites, online forums, bulletin boards and the weekly press. *OS/2 Professional* will continue to provide the types of indispensable technical and review articles you need to make Warp work better for your company. For example, in this issue, you'll read reviews of Speed Pascal/2 and Object Desktop, you'll learn the ins and outs of VisualAge and you'll discover how to optimize your machine without going Pentium.

But *OS/2 Professional* will now reemphasize the award-winning content we have become famous for: hard-hitting, truth-seeking articles. We've cut Express down from 16 pages to just four, leaving us with the same editorial content, but far fewer pages. While it looks like we are skinnier, all that's missing is Express, much of which has been moved to a more efficient location, our website.

Indeed, you will see us using the web more intensely in the weeks to come. From there you can access OS/2 Express, current editorial—before it even hits the newsstands, and soon a lot more as construction continues. Our website is <http://www.ifimpls.com>. Our forum os2.pro is on BIX. See us there.

To the OS/2 community surviving IBM, rest assured we shall live long and prosper. ♦





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"No one who sees it will want to do without it." - Nicholas Petreley, InfoWorld

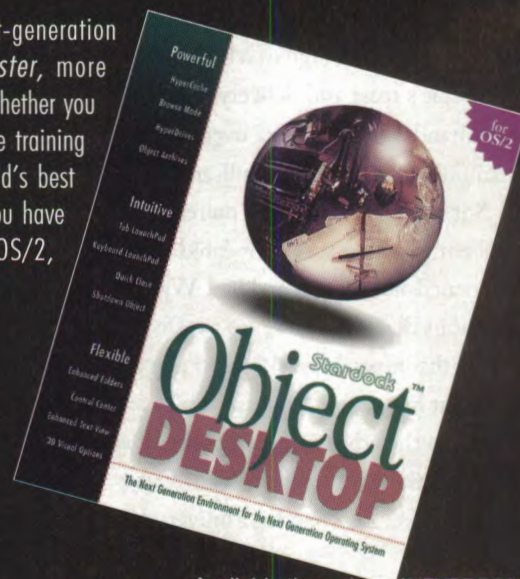
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Comments, criticisms and observations

Really? IBM has a marketing department?

IBM never seems to know when they have a good product or what to do with it. Microsoft, on the other hand, will hound you with ads and freebies. I have repeatedly told Microsoft that I am not interested, but they just keep sending me free magazines like the *Microsoft Magazine*. The articles in this magazine focus on various novelties in Windows 95—why 32-bit is better, multitasking and objects to name a few. And their titles couldn't be more seductive: *Getting started: Life begins at 95*; *Solutions: Personal Finance/Microsoft Office*.

In the early days of OS/2, IBM had a comparable pamphlet. Incredibly, they didn't mail it to everyone on the various computer magazine mailing lists. In fact, you had to pay \$1.65 plus shipping and handling to order it. That's if you could remember the publication number (The OS/2 100, pub# G326-0329-00) and could locate someone inside IBM who had actually heard of it (it's incredible, given that IBM makes computers, databases and software like Bloodhound, aka IBM SearchManager/2). I don't think it has been updated for Warp.

Back then IBM also had a smashing mouse pad they gave away with every purchase and at computer trade shows, although now it has disappeared. One day IBM will learn the very painful lesson that mere technological excellence does not assure a product's survival in the consumer/SOHO marketplace. This would be the case if the market was cerebral in making purchase decisions. It just isn't, at least in my neck of the woods.

James Semakula
via the Internet

OS/2 Express Catalog

I signed up for a two year subscription to *OS/2 Professional* after reading the first issue. It is by far the most informative publication on not only the OS/2 market but also on the computer industry.

Over the past six months I have noticed that each issue is a little thinner

and a little less informative than the previous issue. In October, out of 64 pages, 16 are devoted to the promotion of OS/2 Express. I believe Express is an excellent way for OS/2 users to find OS/2 solutions. At the same time, though, I paid for a magazine subscription, not a catalog.

Paul Watson
via the Internet

I agree. We tried to do much with Express in our magazine. Effective this issue, we have cut Express down to a maximum of four pages. That means our book looks skinnier, even though we're materially the same, with the same amount of pages and hardbitting content and the same amount of advertising. We are moving our Express content to our web site, <http://www.ifimpls.com/os2express>. —Edwin Black

One happy camper

I am happy to convert my complimentary subscription to a paid one. I applaud your goal of independence from IBM and other manufacturers. I have been more than satisfied with the quality of your publication and never miss an opportunity to recommend it to my fellow "Warped" computer users.

R.F. Zidlicky, Jr.
Seaside, California

Lotus blew this sell

I am involved in a project to select a new application suite for my employer, a fairly large healthcare agency that includes two hospitals and an HMO among other things. At this point we are soliciting information and demonstrations of available packages and are not tied down to a particular operating system, as major changes will be made.

So far, Windows 3.1, Windows 95 and Windows NT have been our major focus of attention. I have been pushing for consideration of OS/2 since it has very good compatibility with our present DOS and Windows 3.1 apps, offers greater stability, longer product history than Win95 and lower hardware requirements than Windows NT.

We narrowed the selection down to three choices: Microsoft Office, Novell Perfect Office and Lotus SmartSuite. Microsoft responded with telephone calls, a large package of brochures, product comparisons—even a video tape—and agreed to demonstrate their product for us. Novell responded with some fluffy, glossy brochures and also offered a demonstration. Lotus, on the other hand, didn't even acknowledge our queries, and after repeated phone calls, finally said they didn't have time to demonstrate anything but would send something for us to try ourselves.

Needless to say, this soured a lot of people on Lotus. It undermined me as well as one of my points was that since Lotus is now part of IBM, native OS/2 development of Lotus apps is likely to follow.

A show of hands booted Lotus out of the running right then and there. I fear my effort to promote OS/2 will also go down the drain. Microsoft made everybody feel that they really wanted our business and were willing to go the extra mile to get it. It's almost a forgone conclusion that Microsoft Office will be the product chosen, and most likely Windows NT with it.

I came away feeling that I know how Microsoft has gotten to where they are now. Their marketing is great. One person commented, "Lotus must be doing so well after the buyout that they don't need to have any new business." All in all, a rather astonishing turn of events for me. I no longer wonder why IBM and OS/2 are having such a hard time gaining acceptance. It's almost as if they want to lose.

John Thompson
via the Internet

Please DeScribe some shortcuts

I enjoyed the article on DeScribe [September, 1995] and agree that this is a powerful program. But it is also hard to learn, especially for someone like me coming from WordPerfect 5.1 who

continued on page 42

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If you've ever had that sinking feeling ... caused by sudden data loss, you'll really appreciate Back Again/2¹ Professional, the ultimate backup and recovery for OS/2² Warp. Back Again/2 protects your data from errors – computer, or human.

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System requirements: IBM OS/2 2.1 or greater, and support for most SCSI tape drives

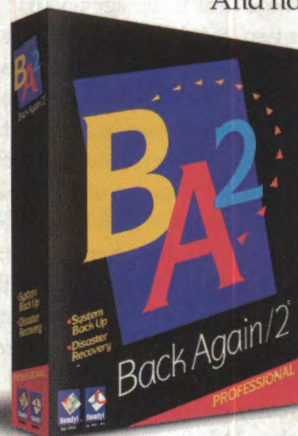
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BYTES & PIECES

News and trivialities, important and obscure

Doin' the pigeon

IBM's newest version of OS/2 Warp, code-named Merlin and scheduled for release mid-1996, "will take Warp to the next logical level," said OS/2 Worldwide Brand Manager Jeff Howard. "I can't divulge now what the other features will be, but (Merlin) will have stuff that the other guys won't have." According to several sources, one new feature should be a tape services system, which would build in direct tape support for the first time, lending a more standard device interface for applications and enabling third-party vendors to add their own device drivers. Users would be able to perform the equivalent of a "DOS-open" without worrying about a lack of device drivers or services.

"First and foremost, we want the best business client we can deliver to medium and large businesses," Howard said. "But at the same time we're making it appealing to the connected consumer. It will more tightly integrate the pieces in Warp Connect together."

Dubbed "the core of the 1996 product plan," Merlin will be network aware, making connections automatically and much more transparently. It will also offer improved multimedia and game capabilities, enhanced plug-and-play features, an easier, more intuitive interface and an updated BonusPak with a feature called the Upgrade Advisor to ease installation.

Features for corporate users will include: C-2 security extensions, improved input/output queue performance, the Developer API Extensions



and integrated OpenDoc runtime support, which enables the use of OpenDoc in applications and lets users imbed OLE 2.0 information in OS/2 Warp documents.

Howard said IBM won't ship the product before the second half of this year; it will choose an official name in the first half. In the meantime, he said, all of IBM's upcoming products are code-named after birds of prey. "Lots of people don't realize that the merlin is a bird of prey," he said. A merlin is a small falcon, also known as a pigeon hawk. "But obviously we also like the double image of the magic we're putting into this project."

Barnes (Big) blue no more

David Barnes has indeed "left the building" for cozier digs. Right now, the man who became synonymous with OS/2 through his promotion campaigns is settling in at the Connecticut-based Right Source, a small technology marketing firm that has and will continue to handle many IBM marketing campaigns such as the "Warped World Tour." Barnes, 36, will have no title—the company's philosophy, he said, is to do whatever it takes to get the job done.

"This is the first time I'll be starting a new job in 17 years," exclaimed an exuberant Barnes. "I'll be doing the entire IBM software strategy—just from the outside. This way I'll probably be going out with an AS/400 machine and an RS/6000 machine and Lotus Notes as well as OS/2."

Barnes has been assured that Right Source won't work for companies that compete directly with IBM, such as Microsoft.

His decision to leave, he said, had been coming for awhile. "If you don't want to be a director, you don't move on in IBM," he said.

Various reports had pegged Barnes's departure on the fallout from a *New*

York Times column, published last summer, that painted him as fed up with OS/2 and quoted him as installing Windows 95 on his home computers. But Barnes said that story had little influence on his leaving. "The *New York Times* journalist—he didn't get my meanings," Barnes said. "I run everything at home—everything. He said I was putting Windows 95 on all my machines—I put it on one." Barnes notes that he also returned that copy to the store, calling it "awful." "I'd use DOS 3 before Windows 95. [The report] was beyond ridiculous. I mean, if you know me, it was like saying the Pope is getting married and his wife is getting an abortion." Barnes also said he was not allowed to respond to the *Times* story, for reasons unknown to him.

The OS/2 guru said he's as supportive as ever of OS/2 and even has friends developing for the platform. But not unlike his own career move, Barnes sees evolution for the underdog OS:

"I believe when Gerstner comes out and says the network is the system and the system is the network—we're talking about \$500 Internet boxes that will be as easy to use as the telephone—who cares what's underneath? I mean, us geek people care and will always care, but most people don't. I want people to open up their IBM Thinkpad and see the IBM logo and Lotus Notes. I want IBM to put the logo on everything, like Microsoft. Luckily Warp can be that underneath engine. But I think it's going to lose its identity because we'll forget about the OS wars. The new battle is going to be on the network, and we're [IBM] a far, far bigger network than Microsoft and far more prepared. Warp will play a part in all of that. It's just when you go to a show, [the OS] won't be as pertinent anymore as other things."

Barnes has his own Web page at <http://www.os2bbs.com/>.

BYTES & PIECES

Team huddle

Team OS/2 is reforming itself in reaction to IBM's pre-Comdex decision to lay off its Team OS/2 personnel. Leading the charge is David Whittle, the man who started it all in the first place. Hopeful that IBM and others will offer financial support for an independent organization, Whittle hit the on-line services to solicit advice from fellow teamers and has fashioned a proposal to revamp his brainchild. At presstime, he was in the process of faxing the document to PSP General Manager John W. Thompson and others.

Team OS/2, started by Whittle within IBM in 1992, always has been free and open to anyone committed to OS/2 and has grown to at least 10,000 members. Teamers do whatever they can to promote OS/2: demonstrating the system at trade shows, in stores, and to

friends; helping users with problems and participating in and encouraging user groups and electronic forums.

The proposal to change Team OS/2 would create a Team OS/2 Foundation "with the charter of serving as a formal interface between Team OS/2 and IBM and other sponsors." Team OS/2 would remain as it is, while the Foundation would take on the bulk of organizational tasks, from coordinating a Team OS/2 presence at trade shows to maintaining a database and publishing a newsletter. It also might collect dues, in the form of time or money, and elect officers.

Whittle hopes to lead the new entity as president or consultant—an about-face that he says reflects his philosophy that Team OS/2 should be independent from IBM and quantitative performance measurements. Whittle had

backed off of leadership within the last two years for personal and professional reasons, and had been planning to leave IBM for months.

Even as Whittle says IBM officials have acknowledged Team OS/2 as a powerful force in pushing the OS, he acknowledged that the proposal is far from a "done deal," both in dealing with IBM and Team OS/2 itself. When mentioning some of the infighting about proposed changes, Whittle sounded weary. "Something's gone wrong," he said. "And hopefully this proposal can get it back on track. A team stands for something, and it moves forward in a positive direction." Should Team OS/2's future not go as he hopes, Whittle said he has plenty of other opportunities. "But I can't think of any that would be more rewarding or enjoyable," he said.

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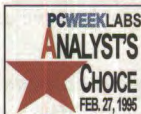
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BYTES & PIECES

IBM and Btrieve

IBM and Btrieve Technologies have teamed up to provide a client/server solution by combining Btrieve database and OS/2 Warp Server. The product, as yet unnamed, is targeted midyear.

With it, users will be able to add Warp Server to their existing network and immediately run their Btrieve-based applications in a client/server configuration without changing any code. Btrieve is a popular client/server database used by commercial developers to build mission-critical applications. Warp Server, expected to ship the end of this month, bundles OS/2 Warp with LAN Server 4.0 and a Windows 95 client. Btrieve will be ported to Warp Server and LAN Server 4.0.

IBM sees the joint venture as a way to broaden its client/server customer base and further penetrate small and

medium-sized businesses. Btrieve claims an installed base of more than 50,000 developers.

Under terms of the partnership, the two companies will collaborate in product development, marketing, channel development and customer service programs.

Better left unsaid

Considering the bomb *PC Week* dropped on OS/2 for the PowerPC three weeks before *OS/2 Professional's* presstime, IBM officials weren't exactly rushing to triage. That story, using anonymous sources, bluntly stated that Warp Connect PowerPC Edition would ship only to developers at the end of 1995, lacking the device drivers and network support to make it consumer-friendly. It also put the kibosh on plans for other commercial versions of

Warp for the PowerPC, including a server version. Joe Stunkard, media relations manager for PSP, officially contradicted those statements in that story. But the din over the official rhetoric seems to be deafening: our own anonymous sources also have concurred that the PPC is dead.

Four days after the *PC Week* story hit, OS/2 Worldwide Brand Manager Jeff Howard declined to comment, claiming he hadn't read the story. *OS/2 Professional* repeatedly phoned PSP for comment. We were variously promised that General Manager Wally Casey, Stunkard, and even John Soyring, a director within PSP, would get back to us. Finally in week three, a media relations rep dispensed with the runaround and told us the official IBM position was that there was nothing new to say about OS/2 and the PowerPC. ♦

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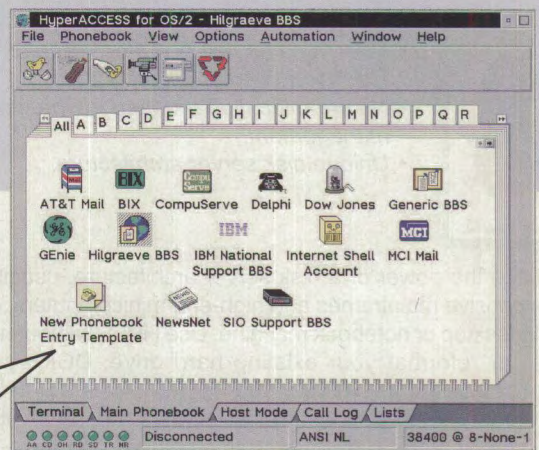
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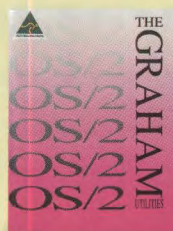
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Free OS/2

BY BRADLEY D. KLIEWER

It has become clear in recent months that, rhetoric to the contrary, IBM has no real commitment to or vision for OS/2. As I mentioned in the October column, the real battlefield for corporate presence is April—that is when corporations will have had their chance to evaluate the 32-bit options and set a strategic direction. The applications currently available will form the basis for that evaluation.

The good news is that truly productive native OS/2 applications have finally matured. DeScribe word processing, Mesa II spreadsheets and ColorWorks image editing have found their way into regular use in our offices.

The bad news is that IBM's own Lotus products such as Word-Pro, 1-2-3 and Access may not arrive in time for first quarter decision making if they ever even see the light of day. IBM should have been in the position to offer its corporate clients a range of choices, pushing competing products as well as its own. But IBM has regularly neglected the nurture and development of third-party OS/2 products and is now hedging its bets by increasing Windows NT development.

IBM's actions have given a major case of the jitters to the ISV community. Less loyal partisans have already written off OS/2's future. We've heard from both writers and software developers that they can no longer afford to devote attention to the OS/2 market. The growing interest in Win 95 and NT has overshadowed OS/2 within the mainstream press, although it maintains some strength in those publications targeted at the business computing community. IBM needs some bold moves to bring OS/2 Warp back into the spotlight. The most obvious would be a new release of the base operating system. Updates are typically annual events, yet Warp is well over one year old now. Worse, the next base upgrade is not expected until at least midyear.

A few columnists have suggested that IBM sell OS/2 Warp to another company, such as Intel. That might have been a good strategy in mid '95, but it would probably be difficult to find an interested buyer at this point. What IBM should really do is give it away.

Not the box, but the code in an attempt to mimic the proliferation of UNIX.

Releasing the source code would be a major news-making event. It would improve the future prospects of Warp by prompting a legion of students to learn (and enhance) the inner workings of the operating system. IBM could continue to sell the official versions and retain (or withhold) the right to license the OS/2 Warp trademark as part of the third-party name. And IBM could sell enhancement kits for Warp Connect (since it undoubtedly couldn't release the Windows source code), libraries of proprietary routines and so forth.

We all know that the real money is not in microcomputer operating systems. I'd be surprised if Microsoft has generated enough

income from Windows 95 to offset the advertising costs, let alone the massive development effort. Microsoft knows what IBM is still learning: application upgrades produce the real revenue. However, the upgrade path is a tougher sell than in past years. Packages have become so feature laden that it's more difficult to add effective new gizmos. The vendor must also prevent the latest features from overwhelming the new user with confusing options and poor performance. Windows 95 gives Microsoft an effective platform for boosting revenue with fairly minor improvements to the base apps. And in

another year or so when Windows 95 falls short on features and robustness, Microsoft can upgrade users to the more expensive NT (and maybe even a new round of apps).

IBM has plenty of corporate applications built around OS/2 Warp's engine. With the Lotus acquisition they have the potential for end-user applications. But unless IBM takes dramatic steps to ensure a user base, OS/2 will wither away. Even attempts to make it a transparent part of network-centric systems could fail if device driver support wanes (a likely end result of a stagnant or dying user base). As I see it, IBM has little to lose by releasing the source code. While a gamble, such a move could bring large rewards. If nothing else, some bold, decisive action would at least prove this draconic organization still has a little fire in its belly. ♦



THE FUTURE OF OS/2

OS/2 IS NOT DEAD. IT IS ALIVE—BUT
ONLY BARELY, AND IT SURE AIN'T KICKIN'



BY EDWIN BLACK AND BRADLEY D. KLIEWER

To be sure, IBM has not pulled the plug on the world's best operating system. And it never will. IBM supports virtually all legacy software it has ever made. It supports PC-DOS, for example, and not long ago issued a new version, PC-DOS 7. Indeed, there will undoubtedly be a PC-DOS 8. The DOSing of OS/2 means IBM will continue to support Warp, and will even continue token development for periodic upgrades, such as Merlin, to cater to that market that is either trapped in or still entranced with Warp.

But the days of IBM using Warp as its exciting, growing vanguard are over. Big Blue and Big Lou are moving

on to other things. This probably means a lot to your company as managers may soon have to make some turning point decisions about whether to stick with Warp (as we are) or transition to NT (as many are).

Let's review IBM's tumultuous 1995. Ouch. PSP began the year stung from bad reviews due to buggy copies of OS/2 Warp accidentally sent to the media. They followed it up with The Pimple People ad campaign, an ambiguous, ill-conceived multimillion-dollar disaster that never told people whether Warp was a way-cool monitor or just maybe an operating system. The embarrassingly inept

SPECIAL REPORT

effort culminated in the self-destructive billboard campaign declaring that Warp "obliterates all the software I use." Some thought this was a public service message by IBM about a new virus called Warp. Others were shocked into disbelief.

Just weeks before the October 11, 1994 launch of Warp, PSP's Marketing Director Wally Casey told *OS/2 Professional*, "If we can't do it this time, we have muffed it." Then-PSP General Manager Dan Lautenbach assured *OS/2 Professional*, "this time it will be different," adding that finally someone takes responsibility for OS/2's success or failure. Who? "I do," was his answer.

The numbers were not good. Growth of Warp's installed base showed that PSP had indeed "muffed it." The campaign was a monumental waste of shareholder's resources.

By May, *OS/2 Professional* publicly called upon IBM to dismantle PSP for the sake of Warp. Many others joined the chorus. It appears that is pretty much what happened. IBM lost some of its more questionable appendages but also some of its brightest stars. By Comdex, IBM began rapidly ramping down the PSP and Warp operation. Some people were severed, some quit, some were "surplussed" and some simply transferred out to a more secure and friendly part of Big Blue. Let's look back at the year's losses.

The OS/2 Interchanges—gone. The Independent Vendor League—gone. The Logo program—gone. The book sponsorship program—gone. Sponsorship of Team OS/2—gone. The Boca Raton facility—gone. Most of the Boca Raton development team—gone.

Allison Johnson and Keith Lindenburg and many others in PR—gone. Ted Salamone in marketing—gone. Gail Ostrow in publishing relations—gone. Pete Hayes, director of advertising—gone. David Barnes, supreme OS/2 being—gone. Dave Whittle, known as Mr. OS/2—gone. Vicci Conway and Janet Gobielle, IBM's Team OS/2 coordinators—gone. Lee Reisweig—gone.

Dan Lautenbach—gone. Lautenbach became vice president of Emerging Markets and OEM Sales. Excuse me, but what is that?

In the final year-end reorganization, the channels organization went to Lotus, which also lost virtually its entire top level executive staff. As such, not a few of Warp's brightest sales execs are either gone or have their resumes out. In addition, PSP was stripped of its media relations, marketing and advertising function (they have all been transferred to the new all-dominating Software Group, known as SWG).

Has PSP been dismantled? Well, all that remains is a shell of

a development group and what IBM calls the Warp brand. More to the point, as we were fact-checking this story in mid-December, people in Austin were unable to verify who would stay, who would go and whether there would even be a PSP by the time this article came out.

Okay, what's ahead? By the end of January, Warp Server, the ultimate connectivity package, ships. "Sometime after June," the next revision of Warp (code-named Merlin) will finally ship, so says IBM. A "noncommercial" version of OS/2 for the PowerPC without drivers has presumably just shipped to developers but the GA version has slipped another year. Key PSP sources say OS/2 for the PowerPC is essentially dead but IBM won't publicly admit it.

When IBM does ship Warp Server and Merlin, it will not do so with giant hoopla. That is over. IBM will do only token promotion. It expects its Warp installed base to remain more or less constant in numbers. It has given up on the desktop and the home market and declared Microsoft the winner in the OS War.

Now hear this. Big Blue turns its back on the desktop, home use and the OS sweepstakes just when every American household is deciding they need at least one computer and some are buying two or three. And just when women, senior citizens and grade schoolers are diving into the power user community. And just when everyone and their grandnephew is talking about the Internet and the Web and everything you need to be slick comes right in Warp. And Warp still retains an extraordinary qualitative edge over Windows 95, and its object orientation still rules. My God. Get a brain, Armonk. There's a market out there. Get some execs who can make a decision and go after it.

But no, IBM has set an example, joining the Wintel world at warp speed, no pun intended. IBM demands that magazines and newspapers submit proposals on Microsoft Excel or they will not be considered for OS/2 advertising. When *OS/2 Professional* refused to use Excel, IBM said it would not grant further advertising. We wouldn't bend. It pulled its ads. IBM also forces Warp resellers to submit their sales figures on Windows software so expensive IBM reimburses them for it. OS/2-compatible software is not allowed. The PC Company, which never had the gumption Apple did, is racing to be as Windows-compatible as everyone else. Select-A-System is an asterisk on a brochure. Meanwhile, the Software Group is readying as much software as possible for NT. OS/2 is of course an afterthought for Lotus, which IBM now owns.



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SPECIAL REPORT

None of this has gone unnoticed by OS/2 vendors. We know. *OS/2 Professional* speaks to some 90 vendors or potential vendors each week to assess their viewpoints on Warp. Major rock solid OS/2 ISVs now have observed significant drops in their sales, especially outside the major dedicated venues of Indelible Blue and OS/2 Express. These ISVs, who were strong earlier this year, are having trouble paying \$500 or \$1,000 bills to their creditors. Many are so disheartened, they have quietly decided to no longer promote their OS/2 products and instead speed NT development. Others have made it clear, their releases must follow Windows 95 and NT versions—which often adds months. Many, such as Corel, have cancelled projects or shelved them altogether, saying IBM has made it impossible to stick with the platform.

Last year also saw the demise of *OS/2 Developer*, one of the finest of all OS/2 publications run by one of Warp's finest stars, Dick Conklin. That is a loss because it means development for the platform can no longer support its own publication. *OS/2 Professional* and the entire community will miss *OS/2 Developer*. Indeed, other computer publications are now talking of creating editorial formats devoted to Warp migration and exit strategies. IBM has worked hard to achieve this situation. They would like to see OS/2 lose its high-profile character and blend in with the OS woodwork so the company can regroup for so-called network-centric campaigns and for massive computer utilities that will support cheap terminals for both commercial and private use.

Where does all this leave corporate America? First, admit the fact that for most of the computing world, Windows is the future. Second, understand that Warp will continue to be here as the superior OS. It won't disappear. But if you stay with this OS, you must be prepared to develop your own apps, wait months after the NT version has shipped to get an upgrade, or use the apps of talented albeit homegrown OS/2 devotee companies. Third, you must decide whether you are sticking with Warp, formulating an exit strategy or switching outright. For many mission-critical applications, Option One is exactly the right decision. Most bank ATMs are still using OS/2 1.3 because it does the job. If you're an insurance company with a complicated document imaging system that interfaces with Notes, why change? If you write for a living, DeScribe is exquisite. You want the Internet, Warp is sweet and swift.

If you are reading this magazine, you already know why Warp is a standard you will want to keep. But IS managers no longer

SPECIAL REPORT

control these decisions. Department heads and company owners now demand software based on their perceptions. Unfortunately, IBM has created the perception that it cannot be believed no matter what. It has burned too many companies who did believe. Indeed, IBM is now seen as developing strategic no-ware.

What is no-ware? It's software that goes nowhere, real software with a vaporous future. Recent examples: WorkGroup—it became no-ware. How many companies spent last year configuring for that path? OS/2 for the PowerPC also has become no-ware. How many companies postponed purchases of Intel-based machines last year assuming they could smoothly transition their Warped software to PowerPC hardware? IBM's promises of support for developers are no-ware. How many developers have abandoned OS/2 because of IBM and left their installed base stranded without hope for updates? IBM's many scheduled OS/2 Updates and OS/2 Interchanges are no-ware. How many corporate clients and developers saw those conferences as a sign of OS/2 vitality, only to be disappointed?

Corporate America has now learned that virtually no one at PSP lasts very long. It seems Big Blue is determined to strip all executive continuity from Warp. Therefore, any promises or predictions by anyone at IBM are being made by a person who can't possibly ensure that they, their department or their department's agenda will still be part of IBM in six months.

Is Warp no-ware? No way. Warp is here to stay. But it's not here to grow. And that's okay with us because we can stick with Warp, DeScribe, Mesa, Faxworks, HyperAccess, Gammatech, BackAgain/2 and a dozen more apps and still be far more productive than a similar Win 95 configuration. How about NT? Talk to me in a year.

You wanted the truth? You got it. Bothered? So are we.

OS/2 Professional decided to ask several leading experts to contribute their opinions on the future of OS/2. Here's what they had to say.

DAVE WHITTLE

FOUNDING FATHER OF TEAM OS/2

Lou Gerstner, at long last, has a vision. Between his Comdex keynote in Las Vegas and a recent PROFS note to IBM employees, it's obvious that this man can't be viewed as your typical

visionless IBM executive anymore. The picture Gerstner has painted of "network-centric computing" is actually a unifying vision that leverages IBM strengths.

So what does this have to do with the future of OS/2? More than we know. OS/2 finally has a worthy role to play for IBM and it won't be viewed solely through the green-shaded eyes of profit anymore. OS/2 Warp Connect and OS/2 Warp Server are already best-of-breed for client-server computing. Now OS/2, with its System Object Model, REXX and robust multithreaded architecture can be seen as the ideal platform for both WWW development and browsing.

OS/2 marketing will no longer be isolated from the rest of IBM, or devoted to a single product in order to unseat Microsoft and its brilliant, if sinister, marketing machine. OS/2 will no longer be dependent on Media Relations that can't relate or Sales that can't sell. OS/2 will be a first-string player on the network-centric IBM Team, even though IBM will also field an integrated team that will provide customers with plenty of choices, including Windows NT and 95.

IBM will continue to invest in OS/2. John W. Thompson is not the man IBM would have asked to head Personal Software Products unless they were looking to ensure his success. IBM's past and future investments in OS/2 are customer's gains and savvy users know a good thing when they see it. Those who follow OS/2's "road less traveled" will find that it can indeed make "all the difference..."

DAVID EINSTEIN

TECHNOLOGY WRITER, SAN FRANCISCO CHRONICLE

The garbage heap of the computer revolution is full of products that died a premature death through no fault of their own. OS/2 may end up suffering that ignoble fate within a few years.

Having already given up on the desktop, where Windows 95 is reinforcing Microsoft's dominance, IBM is making its last stand on the network. There it is a fairer fight, one in which OS/2's potency and sheer elegance have won many converts. IBM's strength as a systems integrator also will help OS/2 maintain the slice of the business that has been painstakingly carved out for it.

It seems inevitable, however, that the same shortcoming which did in OS/2 as a consumer product—lack of applications—will keep it from retaining market share within corporate America.

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SPECIAL REPORT

Microsoft, alas, appears to hold all the cards. It has a stranglehold on mainstream business apps such as Word and Excel, and is continually tightening the integration between them and its own NOS, Windows NT. In the end, the attraction of a seamless application environment will be too much for most companies to resist.

IBM hasn't helped the situation. The company keeps saying it is committed to OS/2, yet, except for the Warp ad campaign, Armonk's public support of the system has been spotty. And in the wake of management shakeups and restructuring over the past few years, it's not really clear how—or even if—the once highly touted operating system fits into Big Blue's plans for the future. One gets the impression that if OS/2 goes comatose, Louis Gerstner is likely to pull it off life support.

PETER COFFEE

ADVANCED TECHNOLOGY ANALYST, PC WEEK LABS

Economists have an expression: "Look at the margin." It means you should compare your options while looking through the windshield, not in the rear view mirror. That's the challenge for users and developers who rely today on OS/2.

For example, it's easy to get discouraged by the way IBM blew the opportunity created by delays of Windows 95. Microsoft told customers to want what IBM had, then took eight more months to ship it. Meanwhile, IBM was running ads that didn't even show the product.

But it doesn't matter how much better it could have been. What matters is whether OS/2's strengths, for example in desktop-through-server scalability, still make OS/2 a compelling alternative to Win 32 for enough customers to make a difference.

"Look at the margin" also works in the other direction. You may feel, "I've spent years developing OS/2 skills. I'm not going to waste that by moving to Win 32." But starting today, what route leads to your most successful future? When you look at the range and productivity of Win 32 tools and applications, the time required to migrate to Win 32 may be trivial compared to the returns. There are exceptions: for example, if you're in healthcare, finance, manufacturing or professional services your clients may retain an OS/2 preference, or at any rate may not have a contrary preference. There may be no reason for you to switch. But your past investments in developing your current skills don't matter.

Look through the windshield, and steer based on what you see.

NICHOLAS PETRELEY

EXECUTIVE EDITOR OF REVIEWS AND TESTING, INFOWORLD

It's difficult to predict the future of OS/2 when so many pundits insist there is none. Its imminent death has been prognosticated even during the years it received numerous popularity and technical awards.

There seems to be a disconnect somewhere. But the fact that OS/2 still has a home on my PC tells you which side I believe is right. Perhaps now that Windows 95 has chalked up an award or two, we'll start seeing some similar pessimism about that product.

Even outside of my own little world, I think OS/2 has a very promising future. How promising depends on which way the industry embraces networked object technology. If OpenDoc picks up substantial momentum, several operating systems will benefit (perhaps even Windows).

However, OS/2 Warp is in the best position to gain the most. If the industry develops around a network-centric technology like Java, then Windows becomes largely irrelevant. OS/2 wins again, only perhaps a little less.

But OS/2 will stick around primarily because it's good business for IBM, even when it loses money for them. A lot of mission-critical solutions are built around OS/2, and many of them are using legacy big iron from IBM. IBM would seriously damage its reputation for supporting legacy solutions if it pulled the plug on OS/2 anytime soon.

So, forget all the dire predictions and weekly speculations in the popular press. The time to really start worrying is when Microsoft ports their productivity applications to Warp. When Microsoft is no longer threatened enough by OS/2 to refuse to develop for it, you know its days are numbered.

JOHN W. THOMPSON

GENERAL MANAGER, PERSONAL SOFTWARE PRODUCTS DIVISION

IBM's commitment to OS/2 Warp is unequivocal. Our development and marketing plans for 1996 are focused on OS/2 as a server operating system and OS/2 as a client for connected consumers.

At the core of the 1996 product plan is the next version of the OS/2 Warp client, code-named Merlin. IBM will significantly enhance OS/2 Warp's user interface to be easier and more intuitive. The Merlin interface will be network-aware and make connections automatically as the user needs them. For corporate

users, Merlin will offer C-2 security extensions and improved input/output queue performance. It will include the Developer API Extensions to make it easier for software developers to write cross-platform applications, and will include OpenDoc runtime support that continues to widen OS/2's technology lead over Windows 95.

On the server side in 1996, IBM will deliver a series of integration-tested, cross-platform application and enabling servers, code-named Project Eagle. OS/2 Warp Server will be one of the base operating systems upon which the Eagle server series is delivered. OS/2 Warp Server is expected to ship in the first quarter of 1996, followed by Directory and Security Services and the SMP version of OS/2 Warp. With its integration of OS/2 Warp and tried-and-true LAN Server 4.0, OS/2 Warp Server offers a complete network operating system that leapfrogs all others.

We continue our work with the IBM Microkernel and OS/2 Warp for the PowerPC. Nearly 20 corporations, universities and research institutes worldwide have licensed the microkernel, laying the foundation for a completely open microkernel standard.

The bottom line is that in 1996, IBM will continue to extend and improve OS/2 Warp as the desktop client for connected consumers and strengthen OS/2 Warp as an advanced, battle-tested server solution that will simplify distributed computing for businesses and workgroups of all sizes. I'm looking forward to an exciting year, working with a consolidated development team in Austin and a marketing team that has the muscle of an integrated Software Group organization behind it. I look forward to seeing you on the road and on the boards!

JERRY POURNELLE

COLUMNIST, OS/2 PROFESSIONAL AND BYTE

Nearly everyone I know thinks OS/2 is superior to both Windows 95 and NT; that Windows 95 will never catch up, but NT might; and that IBM has passed up most of its windows of opportunity. They also think OS/2 is doomed. Of all sad words of tongue and pen, the saddest are these: "It might have been."

The future of OS/2 is an uncertainty. IBM has repeatedly missed important windows of opportunity, enough so that were any lesser company behind OS/2 we'd know it was doomed. On the other hand, IBM still has some of the brainiest programmers in the world hard at work on OS/2 improvements. I recently talked to some of them. IBM has shown little understanding of

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SPECIAL REPORT

the home computer market, but there's always the chance that they'll hire someone who does.

OS/2 will probably retain a niche market for a few years until NT is perfected, after which OS/2 will go the way of Atari and Amiga. In the real world, IBM has brilliant engineers and a heck of a lot of resources; it also has clueless executives.

I can write scenarios in which OS/2 becomes important, and Microsoft doesn't dominate the operating system world. I can hope for that to happen. I don't dare estimate the probability.

STEVE MASTRIANNI

OS/2 SOFTWARE DEVELOPER

OS/2 is on life support. In order to get OS/2 out of intensive care, IBM needs to concentrate on making OS/2 Warp a product that is easy to install and easy to use. This includes improving the install programs, making more device drivers available, adding support for Plug and Play, dynamically loadable device drivers, CD-R and DVD support, better Web tools and getting the industry to write native OS/2 applications. Selling OS/2 as an operating system simply won't work.

OS/2 has to be sold as a platform on which to run some powerful applications—not just simple Windows or DOS conversions, but true, native, multithreaded applications that make use of OS/2's rich set of multitasking services. Powerful applications will pull the operating system platform along with them.

IBM missed its chance by failing to introduce the Microkernel and OS/2 for the PowerPC at a time when both Intel and Microsoft were smarting. Unless something drastic happens, I expect IBM's PowerPC offering to be nothing more than a footnote in computing hardware history. Intel binary compatibility will continue to drive the industry for years to come, so IBM would be wise to concentrate on the Intel version of OS/2, making it easier to install, easier to use and getting some top quality applications delivered. This is OS/2's only hope of survival.

CAREY GREGORY

OS/2 SOFTWARE DEVELOPER

OS/2 is dead. This is not my opinion. This is the pronouncement of senior IBM management. Like diplomats who speak a language in which that which is left unsaid is often more important than that which is explicitly stated, IBM has made it clear that

continued on page 36



DOT EXE

Speedy Pascal Programming

Speed-Pascal/2 is new, but it's stable, functional and easily ports your Pascal code to the complex world of OS/2 Warp.

BY PETER FELDMAN

Pascal programmers, are you tired of C++ bullies kicking sand in your face? Have you ever had an irrepressible desire to create a complete PM application in a single afternoon? Perhaps we're exaggerating a bit, but the new Speed-Pascal/2 (SP/2) development environment offers a relatively easy solution for porting your Pascal code to the complex world of OS/2 Warp.

In the early days of PCs, when hardware resources were limited and programmers were struggling to get an extra 4K of stack space, Phillipe Khan introduced a tiny compiler that would change the way Pascal developers looked at the world. Borland's Turbo Pascal took up about 30 KB of disk space and produced .COM files from 10 to 64 KB in size. Both the world and desktop PCs have changed a bit since then and writing an application for the multitasking, multithreading, window-oriented world of OS/2 is a much more formidable task. Many programmers remain interested in Pascal because it was the basis of their early coding efforts. The new SP/2 package takes its places in this lineage by providing a great deal of compatibility with Turbo Pascal 7.0.

The SP/2 Package

SP/2 is a multi-component package on CD-ROM that makes installation a simple, five-minute affair. Included is an integrated development environment (IDE), about 150 sample source files comprising 2 MB of sample code, a resource editor package

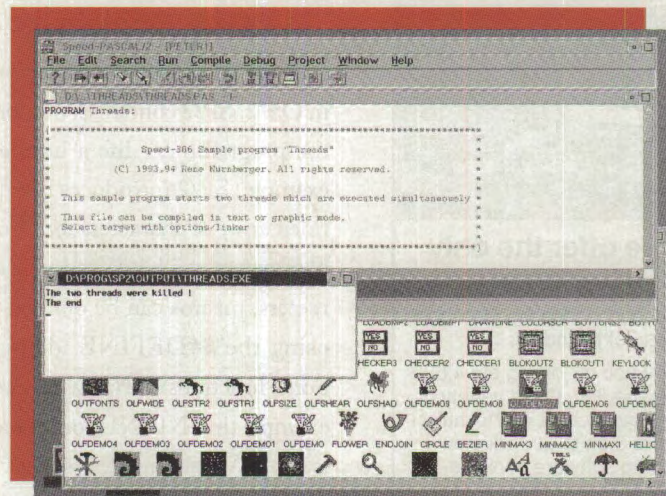
and 2.3 MB of on-line documentation. It also has a command-line compiler, assembler and other utilities. A full installation of SP/2 takes up about 18 MB of hard drive space. The CD-ROM also includes seven HD disk images that can be copied to floppy disks for installation on systems without a CD-ROM drive.

The SP/2 IDE

The control center for the compiler is an attractive integrated development environment that includes a project management system, a source code editor with syntax highlighting a debugger, run, compile and search facilities and a context-sensitive help system. The IDE is fully configurable using the Project Manager so that custom settings for the compiler, linker, directories, startup options, etc., can be maintained for each new application.

Complex applications can be assigned a project name. The IDE is then tailored to the requirements of each project, including compiler behavior, type of application produced (OS/2 full screen, text window,

or 32-bit PM app), memory sizes, debug services, environment, project file lists, etc. Features can be added to a project using SP/2's resource editor, which is itself made up of nine standalone editors. Each standalone editor specializes in the handling of a specific resource, such as menus, dialogs, string, help and subhelp tables, bitmaps, icons and mouse handling. The resource can be edited either visually, textually, or both, depending on its type. Each resource generated by the editor is given a unique WORD-



SP/2's program output window enables users to visually associate icons with any number of programs.

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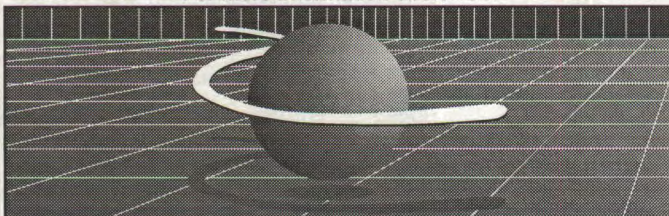
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DOT EXE

type identifier when it is added to the current project. These identifiers are then used via the Project Manager to link the resource into the main program. In most cases, a constant ID name can be specified instead of a numerical value. The source code editor permits up to 64 levels of UNDO.

The Speed-OPML Library

The heart and true workhorse of SP/2 is its Speed-OPML Library, which includes methods and classes to generate, display and manipulate PM Windows. The root object in this library is TObject. Its descendants include predefined objects to handle user-interactive operations such as TEntryField, TDialog, TSpinButton, TSlider, etc. Setting up a PM-Window is relatively simple using the classes TWindowsObject, TWindow, TControl and TDialog. The SP/2 package includes several examples illustrating the construction of a PM Window using these object classes in a series of 14 steps—each a separate .PAS source file—which gradually adds features such as message handling, user input, menu types, etc., to the basic PM Window. Source for all libraries is included.

SP/2, TP7 and the OS/2 Environment

Because C and C++ are the dominant programming languages in OS/2, SP/2 contains a number of accommodations that make the programmer's life a little easier when porting Pascal. For example, SP/2 introduces the data type "CSTRING," a predefined array of characters terminated with a #0 character. NULL parameters can be passed to functions expecting variable parameters, macros can be defined as in C and string substitutions using the \$#DEFINE identifier= something are permitted. Some functions and keywords in TP7 are missing from SP/2. For example the INLINE command is not available, although there is an ASM statement. Open arrays and the COMP datatype are not currently implemented, and the Intr and MSDOS functions are replaced by calls to the OS/2 API. Since SP/2 uses the 32-bit flat memory model, variables at absolute address SEG:OFFSET are (happily, most would say!) not available, though absolute references to variables are allowed (e.g., VAR a: ABSOLUTE b;).

Documentation

At the moment, there is no single SP/2 programming manual, nor does a comprehensive printed index exist. SP/2 includes 12 online reference libraries (.INF files) totalling about 2.25MB.

DOT EXE

There are also six photocopied manuals totaling 500 pages, including a user's guide, OPML Library reference and tutorial, Resource Editor guide, Subroutine reference and Language guide. Users are expected to be familiar with both Pascal programming and the OS/2 API. Many of the source code examples are Pascal ports of examples from *OS/2 Presentation Manager Programming* by Charles Petzold, Ziff-Davis Press 1994. A copy of that book would probably be quite useful until a volume dealing explicitly with SP/2 and OS/2 PM programming becomes available. Support is offered on CompuServe and, for European users only, by a Fax line in Germany.

SP/2 is new, but the program is surprisingly stable, attractive and functional. At its price, SP/2 certainly deserves space on any OS/2 Pascal programmer's workstation. ♦

Peter Feldmann is president of IC Consultants, a firm interested in the effects of technology on human society. He has written extensively on hardware and software products for the PC marketplace.

AT A GLANCE:

**At press time, Speedsoft was gearing up for a January release of Speed-Pascal/2 version 1.5.*

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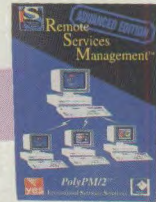
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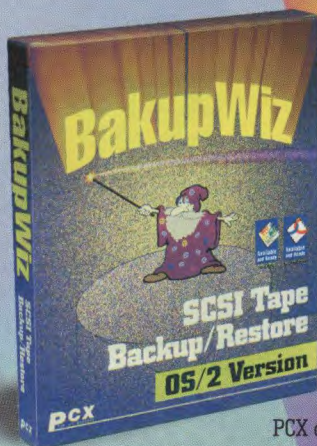
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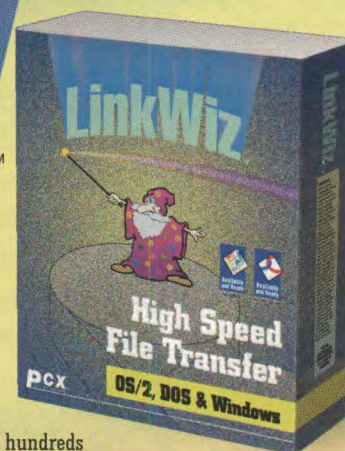
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Taming Your Desktop Demons

If you feel that you've been working with the Desktop from Hell, take a look at Object Desktop.

BY GEOFFREY HOLLANDER

Until I installed Norton Desktop for Windows, it was virtually impossible to fashion my desktop into a lean, organized tool that worked the same way I did. OS/2, which of course provided a vast improvement under the hood, unfortunately brought me back to my pre-Norton days of GUI horror with its Desktop from Hell.

The Desktop and its objects gave the appearance of being friends, but they weren't. I spent a lot of time just looking around for the right folder, program or data file. Many actions were several clicks away. There was no way to manage files. But now Stardock Systems has overcome OS/2's disability with Object Desktop. An array of WPS enhancements that finally brings the Workplace Shell into focus, Object Desktop ranks as one of the most useful PM applications of 1995.

Object Desktop's dramatic WPS influence is evident from the first enhanced window you open. Frame controls look different: control buttons have a polished, three-dimensional look. In addition to the usual controls, Object Desktop adds a close control that closes a window with one click of the mouse. Folder views are improved as well—a status line appearing at the bottom of each window tells you how many objects it contains and the total number of bytes used to store them. High-

lighting objects changes the status line to reflect how many objects are selected and number of bytes used. You can choose a default font for status lines as well; by dragging and dropping a new font onto any window's status line, you can override the default to give it a different look.

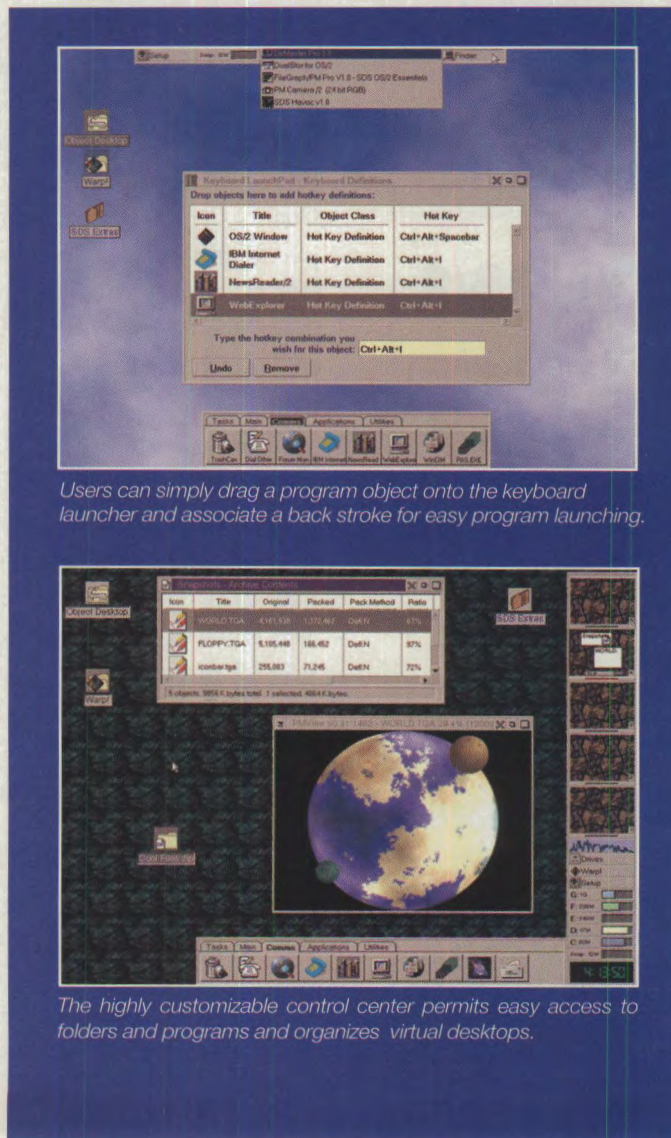
Normally in OS/2, new windows are opened every time you access a nested folder, using additional memory and cluttering up the desktop. With Object Desktop's Browse mode enabled, how-

ever, you can view the contents of a subfolder in the current window. To return to the parent window or move back up the tree to view each parent level, click on the Backup button (displayed when Browse is active) or hit Esc for each level.

Window display speeds are optimized by using HyperCache, a utility which stores the contents of selected folders in memory (OS/2 normally has to access the disk). A second window utility, HyperDrive, makes a "best guess" at file types to speed up data object display.

The Enhanced Data Files utility, a text editor, is provided for viewing and editing text files or files that have no associated data type. Double click on the object to activate the edit window.

The Object Navigator (WPS rendition of the WIN-OS/2 file manager) shows containers (directories) and their contents in a split screen display, with the tree on the left and files on the right.



Users can simply drag a program object onto the keyboard launcher and associate a back stroke for easy program launching.

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For more information circle #318 Available through OS/2 Express
26 OS/2 Professional January 1996

DOT EXE

Working in tandem with the Object Navigator is the Fast Path feature, which accesses folders, virtual desktops, data files and palettes—or launch programs—with a single click. Objects are assigned to the Fast Path list in the Object Navigator settings notebook. Set conveniently along the top of the Object Navigator window are command buttons for copying, moving and deleting objects as well as creating new objects and shadows. Drag and Drop is fully supported, and a shortened Details view is offered for users who wish to display only file size, date, time and attributes.

While its object-oriented features (such as association of files by type) make the Object Navigator invaluable, there is room for improvement. Like typical file managers (such as Stardock's own DirMaster in its OS/2 Essentials product), the Object Navigator should be able to compare one directory against another. Other handy additions would be the ability to access the archive/unarchive functions and more push-buttons in general.

Object Desktop's Control Center offers users a centralized area for organizing work, keeping track of system resources, single click object access and up to 16 virtual desktops (reduces the number of windows open at one time). Each desktop can be configured differently in the Control Center settings notebook. The Control Center's Object Browser accesses data files, programs, palettes and commands with a single click. More commonly used objects like Command Prompts, Drives and System Setup are placed in the Browser section by default. One of the most powerful aspects of the Control Center, the Browser's strength is its flexibility of configuration.

Additional modules such as the CPU Meter (a graph), RAM Meter (amount of available RAM), Swap Meter (size of swap file) and Drive Meter (free drive space available) show the current status of your system's resources.

Object Desktop's replacement for the OS/2 Launchpad—the Tab LaunchPad—improves on its counterpart by adding "tabbed" dividers along the top for organizing and separating launch objects. Customization is more extensive. You can alter the tab button's size and appearance; for example, any button size from 20 to 140 pixels may be specified. Those under 40 pixels use small icons.

The Keyboard LaunchPad opens objects using the keyboard and user-defined hot keys. It works with any object on the WPS desktop, including PM applications, WPS folders, OS/2-windowed programs and full screen sessions, Windows applications and DOS-windowed applications. As with all of Object Desktop's modules, custom options are easily configurable.

DOT EXE

The familiar OS/2 Task Manager has a new look under Object Desktop. Appearing more like an object window, the Enhanced Task Manager has icons for each running task and a toolbar with control buttons that Show, Help, Hide, Tile, Close, Cascade, [access] Settings and Filter objects. There is also a Run button for entering OS/2 commands. Any command line program can be run from the Enhanced Task Manager, including DOS and Windows applications. Previously entered commands are saved for reuse in the field's drop-down list.

Object Archives enable you to work with a variety of compressed files without first having to archive or unarchive files before opening, renaming, copying or saving them. Object Archives support ZIP (Info-Zip), LHA (LH/2), ZOO (GNU) and ARC formats. For users' convenience, Stardock includes copies of these utilities with the Object Desktop package.

Compression and decompression are performed seamlessly on objects that are stored in an archive. Tear off a new object from an archive template to create a new (empty) archive object. To compress files or folders, simply drag and drop them onto an archive. Archive objects act as folders. To open an archived object, double click on it in an opened archive window. A status bar displays summary information about the number of objects in the archive, number selected and bytes used by each.

You can selectively install any or all of Object Desktop's modules depending on what you need or use the most. Other segments can be added or uninstalled later. Add to this Object Desktop's comprehensive customization options, and you can have things your way at last. If you, too, feel that you've been working with the Desktop from Hell, try letting Object Desktop tame the demons in your workspace. ♦

Geoffrey Hollander is the principal of MailPouch, a computer service bureau based in Lake Oswego, Oregon, that serves the direct mail marketing industry. He can be reached via CompuServe at 75202,3527.

AT A GLANCE:

Object Desktop

Stardock Systems

13405 Addison

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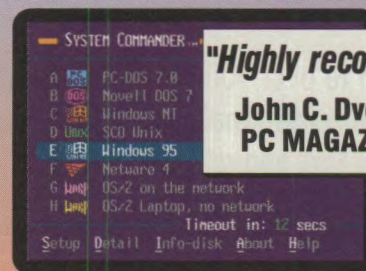
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Perfect solution for backup to floppy disk, magneto optical and LANs. Includes drag-and-drop support, scheduling and command line utilities so you can completely restore your OS/2 partition. Back Again/2 3.0 personal edition has all the features of our Professional edition without the support for SCSI tape drives. 3.5 disk.

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The OS/2 solution for backup to SCSI tape, Bernoulli, Syquest,

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Cheyenne Software, Inc.

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NovaStor

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NovaBack for OS/2 1.x & 2.x

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MSR \$149.00

NovaStor

NovaBack for OS/2 is a complete backup solution for all OS/2 workstations or networks. Support for OS/2 1.x and 2.x is shipped together. NovaBack supports more than 300 SCSI and QIC-80 tape drives.



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DeskMan/2 v1.51b **\$46.00**
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Development Technologies
Award-winning, fast, flexible, multi-function tools for all personal and corporate OS/2 users. Enhance productivity and ease of use with powerful drag and drop virtual desktops and Workplace Shell Extensions. Features include security and window management; GUI and API (including LAN and CID support) to manage and backup WPS objects; configuration and desktop snapshot facility; more!



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Item number 474 **MSR \$99.95**

Development Technologies
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GammaTech Power Pack for OS/2 **\$49.00**
Item number 110 **MSR \$69.95**

Softouch Systems, Inc.
Power Pack is a PM-based application that launches applications and executes lengthy keystroke operations with a couple of function keys. It also includes a sophisticated editor to create, delete or modify OS/2 INI files and the Extended Attributes associated with your data files. Supports both ASCII and hex. Enhanced screen saver with "hot" corners included with this offer.

Object Desktop **\$89.00**
Item number 501 **MSR 99.95**

Stardock Systems
Object Desktop takes advantage of OS/2's advanced workplace shell interface and gives it many features users have been asking for years. Includes an object oriented file manager called the Object Navigator which allows you to use data or run many programs directly from a compressed archive (such as ZIP). *CID enabled install available

OS/2 Essentials **\$27.00**
Item number 368 **MSR \$39.95**

Stardock Systems
OS/2 Essentials is a mini-application suite with an advanced file manager, a screen saver with green monitor support, a workplace shell trash can, a directory space grapher, a taskbar, a multimedia arcade game and more. Most of the applications can use MMPM/2, are all multithreaded and have slick PM interfaces.

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The Secure Workplace for OS/2 offers workstation security, extended control of the Workplace Shell, and a set of workplace management utilities no user should be without.

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Item number 491 **MSR \$99.95**

V Communications
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Professional Edition **\$399.00**
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Softouch Systems, Inc.
Softouch File Star manipulates all your disk files with a drive window, a directory window and two file windows within a single session. It browses files with any browser or viewer, zips files to save space, monitors free space, swapper size and RAM size dynamically.

Softouch File Star Ten Pak **\$449.00**
Item number 367 **MSR \$799.00**
Softouch Systems, Inc.

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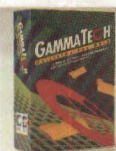
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MHR
Production job scheduling utility that eliminates the need for human intervention during routine batch processing.

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GammaTech Utilities for OS/2 **\$99.00**
Item number 109 **MSR \$149.00**

Softouch Systems, Inc.
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PartitionMagic Personal 2.0 **\$64.00**
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Clear & Simple, Inc.
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Performance Plus 2.1 **sale price \$5.00**
Item number 115

PM Patrol **\$66.00**
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MSR Development
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Softouch UniMaint 4.0 **\$71.00**
Item number 435 **MSR \$99.00**

Softouch Systems, Inc.
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HyperACCESS/5 V3.1 **\$99.00**
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PM2YOU v 2.1 **\$190.00**
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Ridax
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SpellGuard **\$19.00**
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The spell checker for all apps! SpellGuard is an as you type spell checker for PM, OS/2, DOS and WIN-OS/2 windowed programs. A must have for communications apps users!

TE/2 1.31 **\$29.00**
Item number 107T
Oberon Software

WinTerm—Windows Terminal Option for PM2YOU, v.2.4 **\$34.00**
Item number 482
Ridax
With the WinTerm terminal option for PM2YOU, you can connect to an OS/2 host running PM2YOU and remote control the entire Presentation Manager graphical desktop. WinTerm runs with Windows 3.0, Windows 3.1 and Windows 95.

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Unite CD-Maker **\$219.00**
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Cirrus Technology
Unite CD-Maker is a Workplace Shell enabled mastering product for OS/2 Warp. Use it to create CD-ROMs.

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Cenvi for OS/2 **\$55.00**
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C Set++ Version **\$215.00**
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MSR \$215.00

Borland Version **\$215.00**
Item number 119D
MSR \$215.00

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GammaTech REXX SuperSet/2 for OS/2 **\$69.00**
Item number 174
SoftTouch Systems, Inc.
SuperSet/2 contains more than 308 functions in 7 DLLs; extensions include support for EHLLAPI, LAN Server, NetBios, TCP/IP and miscellaneous host utilities. It simplifies your life by eliminating the need to maintain poorly documented DLLs from disparate sources. 650-page reference manual included.

REXX Diagnostic Commander **\$35.00**
Item number 139
Suitable Alternatives
An interactive REXX debugging tool.

VisPro/REXX Gold Edition **\$225.00**
Item number 170
Hockware
MSR \$299.00

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PMPro Prolog for OS/2 **\$40.00**
Item number 492
Gregory Bourassa Computer Engineering Services
An affordable full-featured implementation of the Prolog language, specifically created for OS/2. Tight OS/2 workplace integration and friendly user interface, and a detachable inference engine that can be embedded in individual programs. PM Pro uses the power of OS/2, and allows access to 3rd-party DLLs from within rules
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ObjectPM Control Pack **\$89.00**
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Secant Technologies
Professional set of PM custom controls that can be used in most development environments. Controls include a spreadsheet, multi-column listbox, data field, RTF viewer, and more.
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Tritus (limited quantity)
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Unite Image Viewer Object Version 1.2 **\$1,099.00**
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Cirrus Technology
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The first Document Image Viewer SOM developer's object specifically for OS/2. Ready for Watcom's VX-REXX, IBM's VisualAge or as an API set. The viewer may be used for bitonal, greyscale and JPEG color image display, manipulation and printing.

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Cirrus Technology
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The first Scanner SOM developer's object specifically for OS/2. Ready for use with Watcom's VX-REXX, IBM's VisualAge, or as an API set. The scanner object may be used with select SCSI-based devices and includes the Unite Image Viewer Object.

Visual SlickEdit **\$190.00**
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MicroEdge, Inc.
MSR \$219.00
Award-winning, customizable Visual SlickEdit (R) is the new standard in programmer's editors. Save time using CUA, Brief, Emacs, and VI emulations. Program using SmartPaste(TM), syntax color-coding, and built-in dialog editor.

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IPF Editor **\$139.00**
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Perez Computing Services
MSR \$150.00
IPF Editor, a 32-bit PM program, makes it easy to create on-line documents and context-sensitive help for OS/2 applications without learning IPF.

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Cogent/SQL for OS/2 **\$895.00**
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Yudkin Consulting
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Cogent/SQL is the leading programmable code generator authoring tool with the widest variety of integrated multi-platform data access methods and connectivity options. DB/2 is required.

OnCmd xBase for OS/2
On-Line Data
OnCmd is a native OS/2 32 bit database development environment in the familiar Xbase language. Migrate applications from DBase, Clipper, or FoxPro. Preserve your Xbase investment and eliminate Windows overhead! Network and Client/Server Ready with Unlimited Runtimes available.

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Item number 456
MSR \$249.00

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CapWatch 1.0 **\$119.00**
Item number 427
Creative Assistance Software
MSR \$129.00
Monitors LAN capacity and generates alerts according to the administrator's parameters.

CleverManage **\$795.00**
Item number 479
Clevrosoft
MSR \$895.00
This is the tool for LAN administrators. CleverManage features include: software distribution and installation, inventory, remote control, application metering, diagnostics, configuration management, and much more.

CleverWatch **\$710.00**
Item number 475
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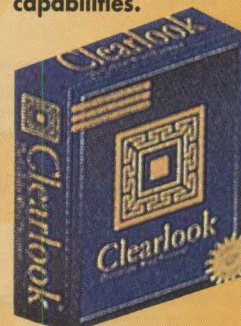
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HANDS ON UPGRADING Without Going Pentium

Ocean Information Systems' 486-100 consistently outperforms a Pentium-100 because of its EDRAM and modified architecture.

BY BRUCE BYFIELD

Barnett Fischer, director of research and development at Ocean Information Systems, has a dramatic way to demonstrate Ocean's new 486DX4-100 motherboard, the Hippo DCA2. At the end of a software demo, he asks if the audience was impressed with the speed. When people answer yes, he reveals that 10 programs have been running minimized at the same time.

The secret is Ocean's DynamiCache architecture. Offering high performance at an inexpensive price, the Hippo DCA2 is a competitive alternative to a Pentium. It is especially attractive to OS/2 users, who often have to tweak a Pentium to get acceptable performance.

To anyone who tests hardware, the claim that a specific 486-100 outperforms a specific Pentium is not surprising. A buyer at Simon Fraser University, for example, tells me he recently bought a company's 486-100s instead of its Pentium-90s.

The secret is the structure of a motherboard's external cache, which passes information between the CPU and the rest of the system. Usually 256k, external caches were an inexpensive way to increase speed when only small DOS programs were used. Recently, however, 32-bit operating systems, larger programs and multitasking have left external caches unable to cope. Under intensive computing, external caches actually hamper performance because they cannot handle quickly enough the amount of information

they receive. In extreme cases, this cache saturation can be compounded by disk thrashing, slowing modern computers to 20 percent or less of their clock speed.

Pentiums are no exception. The cache bottleneck offsets their superior speed. Other hardware also affects performance to a substantial degree, and thus a well-designed 486 system can outperform a mediocre Pentium.

What is unique about the Hippo DCA2 is that it consistently outperforms a Pentium-100 on an otherwise identical system, thanks to its EDRAM memory and modified architecture. EDRAM chips have several advantages over conventional DRAM memory. They are faster—15 nanoseconds as opposed to 60 or 70—and exchange data with the CPU over a much wider bandwidth. Most important, as the name suggests, a DynamiCache is not limited in size. All the installed EDRAM can be used for the cache, which shrinks or grows as programs open or close.

With these innovations, the cache bottleneck disappears, and the system's average speed is increased (see Table 1). Impressive in DOS, the gain is breathtaking in OS/2. It is

TABLE 1

Operating System	Typical Processing Load	Maximum % of Processing Speed	
		Regular Board	Hippo DCA2
DOS	25%	30%	55%
WIN 3.1	50%	20%	45%
OS/2, UNIX, WINDOWS NT	50-100%	10-20%	35-45%

Figures courtesy of Ocean Information Systems

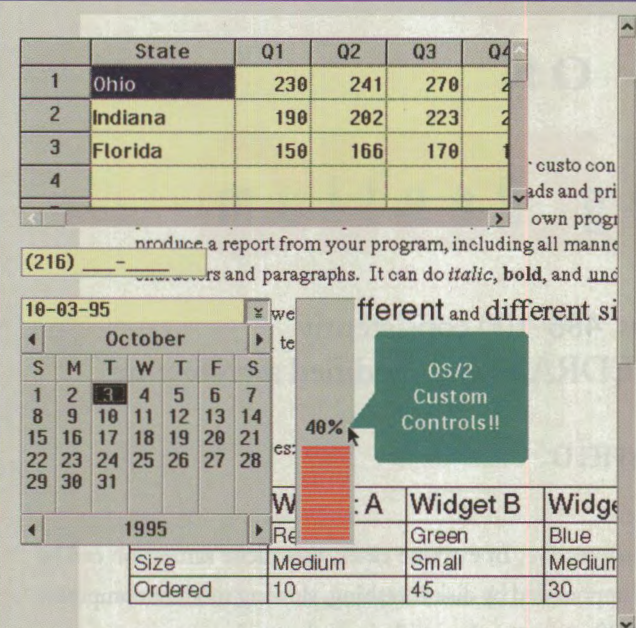
Speed decreases as more of a system's maximum processing load is used. Advanced operating systems use more of the maximum load more often, and benefit most from DynamiCache Technology.

HANDS ON


also ideal for modern computing. CAD, multimedia, graphics, data transfer, software compiling, Application and File Servers—all are faster with a Hippo board. For OS/2 users, the most important advantage lies in multitasking. Because of the enlarged data bandwidth, several RAM-hungry applications can run at the same time without any of the loss of speed usually associated with multitasking.

On my Hippo-equipped system, I detect a slowdown only when programs use all the available RAM. Then, cacheless and using the swap file, the system slows so suddenly that I can pinpoint the moment without benchmark tools. Yet, even then, performance is no worse than multitasking three or four programs on a 486-33, 8MB system. In short, for OS/2 users, the Hippo offers enhanced multitasking without a heavy investment in RAM.

The claimed benefits may seem extreme. Indeed, seeing a comparison of a Hippo board and a Pentium at the April Comdex, many believed that the Pentium was doctored. How-



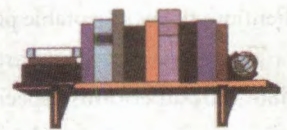
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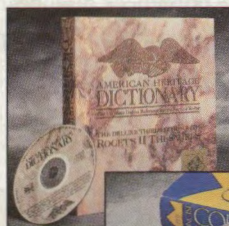
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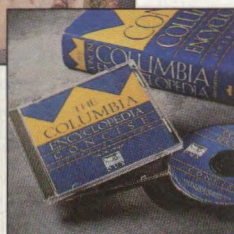


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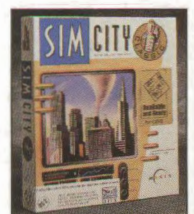
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HANDS ON

ever, the claims are verified by Sofwin Laboratories, an independent hardware testing facility which awarded the board its 1994 Top Gun Award for high performance. Comparing the Hippo DCA2's read and write operations to those of a Pentium-100 board on the same system (Tables 2 and 3), Robert Butche, chief technologist at Sofwin, observed that the Hippo "soundly beat Intel's Pentium system board at both 16- and 32-bit operations."

Despite a four-year-old controller and hard drive, my Hippo board increases disk access 350 percent and offers writes as fast as the Pentium tested by Sofwin. When the system was upgraded to a Fast-SCII II hard drive, Sofwin's pcpower utility showed reads and writes averaging 15 percent faster than the Hippo board in Sofwin's test. Although my first impulse is to discount all manufacturers' claims, I'm convinced that the Hippo board delivers

TABLE 2

Ocean Information Systems 688 Grand Arrow Circle Covina CA 91722 (818) 339-8888	System Overview IntelDX4/100 System Price as tested: \$2,540.00	DCA/2 DX4/100 Mother Board Price as tested: \$350.00
Processor	Intel	IntelDX4
Bus Configuration	6 ISA	3 Vesa
Disk Drive	Western Digital Caviar 2540 540 megabyte EIDE	
Drive Electronics	Promise Technologies EIDE 2300 EIDE	
Video Electronics	Diamond Stealth 64, 2 MB VRAM VESA LB	

Figures courtesy of Ocean Information Systems and Sofwin Laboratories

Hardware used in Sofwin Testing. Only the motherboard changed.

everything Ocean Information Systems claims.

A DynamiCache board costs about two-thirds the price of an equivalent Pentium. Although EDRAM costs slightly more than DRAM, this difference can be offset by choosing a board with an AMD rather than an Intel CPU. The boards include two slots for 72-pin DRAM, so buyers can also salvage their old RAM. However, at least 8MB of EDRAM—preferably 16—are needed to take full advantage of the boards.

Of course, there are limitations. High end users should know that the boards have only two EDRAM slots, so no more than 32MB of EDRAM can be installed. A CPU fan also is essential, especially in a small or crowded case. In one instance, a system with 16MB EDRAM and 8MB DRAM had trouble addressing the EDRAM with a SCSI controller, but the problem disappeared without the DRAM or when an IDE controller was used instead of SCSI.

Pentiums are still an attractive upgrade. The P6 offers its own corrections to motherboard architecture, and a DynamiCache Pentium is currently in development. However, the combination of price and performance makes the Hippo DCA2 by far the best buy today. ♦

Bruce Byfield is an instructor of English at Simon Fraser University in Burnaby, Canada. He can be reached at byfield@monoshee.sfu.ca.

TABLE 3

Average Read Operations (in Nanoseconds)		
	Ocean DCA/2 @ 100 MHz	Intel Pentium @ 100 MHz
8-bit	19.47	20.49
16-bit	18.76	20.34
32-bit	28.40	30.28
Average Write Operations		
8-bit	30.90	102.08
16-bit	30.34	101.27
32-bit	29.79	100.62

Figures courtesy of Ocean Information Systems and Sofwin Laboratories

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SPECIAL REPORT

continued from page 20

OS/2 is dead. They have stated it clearly with deafening silence in response to the Windows 95 blitzkrieg.

I would expect IBM to make it official sometime by mid-1996. I would also expect this to mark the end of IBM efforts in the desktop operating system market. Mr. Gerstner has declared it an old war, one to which he does not intend to devote further time and attention. Rather, he intends to fight the next war. For IBM, its customers and the entire computing community's sake, I hope he's right. Control of the desktop combined with control of the network equals control of the entire market in today's computing environment. If Windows 95 controls the desktop and NT gains control of the server market, then enterprise systems become the last significant domain not controlled by Microsoft.

Is IBM's Alamo in the future? Will IBM find itself battling to maintain that last sacred fort of enterprise power in the computer rooms of the corporate world? That is a significant probability. ♦

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Working with VisualAge C++ Data Access Builder

BY CHRISTINA LAU

With VisualAge C++ 3.0, IBM has completely overhauled C++ programming, making it more intuitive and efficient. Gone is the painstaking process of hammering out 20 lines of code for a single action. New tools that turn commands and relationships into diagrams let the programmer focus on how an application should work instead of the instructions that tell the computer to make it work. Needless to say, this saves considerable time in hunting for syntactic and transposition errors through endless lines of code.

IBM has included far too many tools to cover in a single article. For example, Project Smarts provides a set of pre-configured projects to use as a base for your applications. Visual Builder helps you see your screen layout and lets you connect and assemble those prefabricated parts. The Direct-to-SOM compiler allows you to create SOM objects by coding directly in C++, and it will generate the IDL for you. A new language-sensitive editor also is included in the package, and many of the existing C Set ++ components have been upgraded and integrated into the VisualAge C++ development environment.

The focus of our attention this month will be the Data Access Builder, a powerful tool for creating classes that access relational databases.

Data Access Builder

To provide object access to relational data, one must first understand the mapping between the object model and the relational model. The most straightforward mapping is a one-to-one mapping. A table is mapped to a class, a column is mapped to an attribute and a row is mapped to an object. The Data Access Builder is a graphical tool that helps you with this mapping process. You can start the tool by double clicking on the Data Access Builder icon in the VisualAge C++ 3.0 Tools folder. You then select which database you want to con-

LISTING 1

Course Table		
courseid	char(5)	Primary Key
description	varchar(20)	
Student Table		
studid	smallint	Primary Key
enroll	char(5)	Primary Key
name	varchar(30)	

LISTING 2

```
#include "idsmcon.hpp"
#include "studentv.hpp"
#include "coursev.hpp"
#include <iomanip.h>
void addACourse(IString id, IString title)
{
    Course aCourse;
    try {
        aCourse.setCourseid(id);
        aCourse.setDescription(title);
        aCourse.add();
    }
    catch (IDSAccessError &exc) {

        cout << "Error id:" << exc.errorId() << endl;
        cout << "Error Text:" << exc.text() << endl;
    }
}

void enrollStudent(short sid, IString name, IString
courseId)
{
    Student aStudent;

    try {
        aStudent.setStudid(sid);
        aStudent.setName(name);
        aStudent.setEnroll(courseId);
        aStudent.add();
    }
    catch (IDSAccessError &exc) {
        cout << "Error id:" << exc.errorId() << endl;
        cout << "Error Text:" << exc.text() << endl;
    }
}

void query()
{
    StudentManager aStudentMgr;
    Student *studPtr;
    Course aCourse;
```


CODE CACHE

```
cout << "Student Name  Course Description  ";
cout << endl;
cout << "===== " ;
cout << endl;

// Retrieve all students from Student table
aStudentMgr.refresh();

IVSequence<Student *>::Cursor
    cursor(*(aStudentMgr.items()));

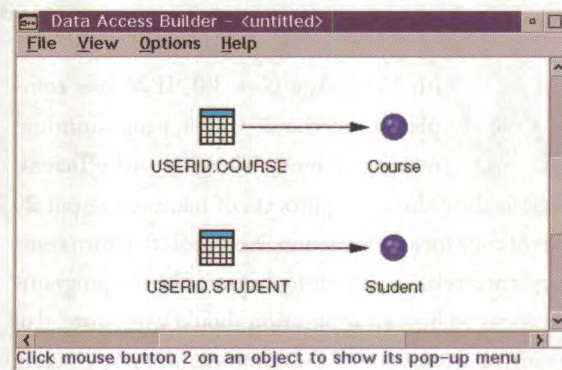
for (cursor.setToFirst(); cursor.isValid();
     cursor.setToNext())
{
    studPtr =
        aStudentMgr.items()->elementAt(cursor);

    // Retrieve course description using course id
    aCourse.setCourseid(studPtr->enroll());
    aCourse.retrieve();

    cout << studPtr->name() << " ";
    cout << aCourse.description() << "\n";
}

main(int argc, char *argv[], char *envp[])
```

nect to and which tables you want to work with. In the figure below, the Course and the Student tables were selected and mapped to a corresponding Course and Student class.



If you double click on the table icon for Student, you can look at the details of the table definition. These include the database name, the column names, the column types and the referential constraints. Listing 1 lists the column information for the two tables. The Course

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CODE CACHE

table stores all the courses offered by the university. The Student table stores the courses that a student takes by defining the column "enroll" as a foreign key to the Course table.

The default mapping connects each column in the table to an attribute in the class. SQL data types are mapped to C++ data types. Using the Data Access Builder, you can modify the default mappings. For example, you can delete an attribute if you do not want it to appear in the class.

Data Access Code Generation

Once you determine the mapping, click on the class icon and select Generate to generate the data access methods for that class. For the Course table, the Data Access Builder will generate a **Course** class and a **CourseManager** class. The Course class provides a "get" and "set" operation for each attribute; it also provides the add, update, delete and retrieve methods for editing a Course

```
{
    IDatastore dsm( "UNIV",
                    "USERID",
                    "PASSWORD" );

    // Connect to the database
    try {
        dsm.connect();
    }
    catch (IException &exc) {
        cout << "Failed: Connection" << endl;
        cout << "Error id: " << exc.errorId() << endl;
        cout << "Error Text: " << exc.text() << endl;
    }

    // Add some courses
    addACourse("COMP101",
               "Computing Science I");
    addACourse("MATH201", "Calculus II");

    // Enroll some student in the courses
    enrollStudent(12345, "Kevin Smith",
                  "COMP101");
    enrollStudent(12345, "Kevin Smith",
                  "MATH201");
    enrollStudent(12566, "Mary Rennie",
                  "COMP101");
}
```

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CODE CACHE

```
// Print out course descriptions for each student
query();

// Commit the changes
dsm.commit();

// Disconnect from the datastore
try {
    dsm.disconnect();
}
catch (IException &exc) {
    cout << "Failed: Disconnection" << endl;
    cout << "Error id: " << exc.errorId() << endl;
    cout << "Error Text: " << exc.text() << endl;
}
}
```

LISTING 3

Student Name	Course Description
Kevin Smith	Computing Science I
Kevin Smith	Calculus II
Mary Rennie	Computing Science I

object. The **CourseManager** class manages a collection of courses. It has a refresh and a select method: the refresh method retrieves all the instances from the Course table, while the select method retrieves the instances that match a specified predicate from the Course table.

The code generator produces several files in your working directory. The class header file is the file you include in your client program and contains all the information you need when writing your application. The class implementation file contains code that handles object initialization, error conditions and the translation of tuples that are returned from a SQL SELECT into objects. Finally, the familiar .sql file contains the embedded SQL statements that do the actual table updates. You don't have to worry about the details in these generated files.

When you select Generate, you can either generate your code as Parts or as IDL. Select **Parts** if you want to

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CODE CACHE

write your application in C++ or if you want to use the Visual Builder to create a GUI front end for your data access application. Select **IDL** if you intend to write your application in SOM or if you want to use DSOM to access the objects remotely.

A set of database access classes are provided to let you connect to and disconnect from the database, as well as to commit or rollback your transactions. Similar to the generated code, there is a C++ version and a SOM version of the class library. You should use the C++ version if you generate your data access code as Parts, and the SOM version if you generate your data access code as IDL.

Client Application

Listing 2 demonstrates how an application might use the C++ version of the generated code and the class library. The program first connects to the "UNIV" database. It adds two courses to the Course table, and adds three student enrollments to the Student table. The **query()** function prints out the course description for each student by invoking the **StudentManager.refresh()**

method to retrieve all the students, and then invokes the **Course.retrieve()** method to retrieve the course description for the course the student is enrolled in. The program then commits the changes and disconnects from the database. The output of this program appears in Listing 3.

Reusable Parts

The Data Access Builder allows you to create database applications quickly by removing the tedious job of having to write and debug SQL. The example presented in this article illustrates how you can use the generated parts directly. Of course, if you really want to boost your productivity, you will go on to master the Visual Builder which can visually connect these parts to your application front end. But that's a topic for another time. ♦

Christina Lau is the author of the book Object-Oriented Programming Using SOM and DSOM (VNR, 1994). She works in the Application Development area in the IBM SWS Toronto Laboratory. She can be reached at clau@torolab6.vnet.ibm.com.

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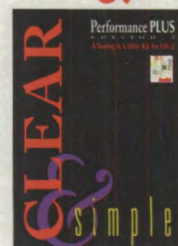
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INPUT

continued from page 7

must still use that software at work. I particularly find the emphasis on the mouse hard to get used to. In Word-Perfect I never use the mouse, and rarely lift my fingers from the keyboard.

Alex Bell
via the Internet

That old C prompt

I bought OS/2 because I wanted a GUI system that wasn't Windows or featured the DOS prompt. Even though I am DOS literate, I ask why do I have to go to the flashing C prompt to run a program? Likewise, why do I have to bring up Program Manager to run a Windows program? I like the features of OS/2 and the desktop is just fine, but my question is why did I buy OS/2 Warp if I still use Windows 3.1 and DOS? And who's making programs

for OS/2? A name that I or anybody in the general computing public knows?

I could always use Geoworks over DOS and have more productivity than plain Windows or OS/2 gives me. OS/2, Windows 95 and NT are all multitasking and multithreading. Well, so is Geoworks and has been since 1990. It runs on any IBM compatible computer, uses what memory I have and doesn't load any drivers to take up memory. Do I like it? Yes!

That's why I bought OS/2, to get away from the C prompt and Windows. Drag, drop and click on a DOS or Windows program and it runs from your desktop. Is that too much to ask of an operating system?

Frank A. Barrett
Salt Lake City, Utah

While most of the major vendors have not ported their applications to OS/2, the wares from smaller vendors have improved substantially. Mesa 2 now sports a proper keyboard interface and other enhancements that makes the spreadsheet a wonderful adjunct to the native application toolbox.

Even DeScribe, which has been around for much longer than most native apps, continues to make incremental improvements in such areas as drag and drop support. As for the DOS prompt and Program Manager, you can drag the Program object from the Templates folder to the Desktop (or any other convenient folder) to create an icon for any of the supported environments: DOS, Windows or native OS/2. When you first install OS/2 Warp it will create folders for DOS, Windows and OS/2 that configure such icons for applications Warp recognizes.

—Bradley D. Kliewer ♦

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December 1994

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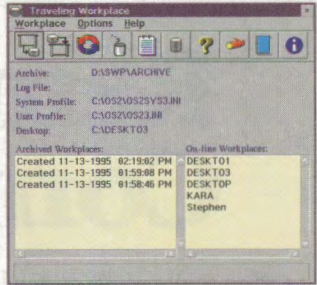
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Cybersleuthing with OS/2

BY GORDON SCOTT

OS/2's Internet solution is a winner—literally. At the most recent Internet World conference in Boston, IBM, Apple Computer and Microsoft went head-to-head in the first annual Internet Bowl. The IBM team, using an IBM PC Server 320 and OS/2 Web-Explorer, soundly beat its competitors—racking up nearly twice the number of points (the other two teams tied for number of points earned) in locating obscure Web sites and answering such questions as: "Throughout the Brady Bunch's five-season run, the word 'sex' was used only once; name the episode." All three teams tapped into the Internet through the IBM Global Network.

The IBM team's system worked flawlessly (one of their competitors had to reboot during the competition), and made it easy to find information quickly. Also, the IBM team used some important information-finding techniques that should be useful for any Web explorer.

When speed is of the utmost concern in a search, choose your search tools wisely. There are effective—and not so effective—ways to use them. Also, while all successful searches start with a good Internet connection setup, keep in mind that the more you know about what it is you're searching for, the easier it will be to find it. Any clue will help you direct your choice of the correct Web-searching tool and hence make your search more efficient.

The following ideas, tools and resources are some of those things you'll want to know about when using OS/2 to explore the Internet. Some of these tips don't require an OS/2 setup, but the OS/2 Internet applications really bring them alive.

Use the OpenText Index for finding text search strings.

- Connect to URL <http://www.opentext.com>.
- Enter the text that is part of the string you want to find.

The OpenText Index is an index of all text available on the Web, organized for effective searching. This site gives you a good way to find quotes when you are only certain of one phrase in the quote. It is also a good way to find documents that contain specific names. It's not so good, however, for quickly finding a specific Web site or a specific company's home page.

For that kind of search, use a tool such as Yahoo. Yahoo has a great set of lists and search mechanisms to help if, for instance, you know the name of a company and suspect they have a Web page, but you don't know the URL.

Use Yahoo to find any company's home page.

- Connect to URL <http://www.yahoo.com>.
- Use the search mechanisms and structured lists to locate the company you want.

For comprehensive searches of more than one index, use IBM's infoMarket Search engine.

- Connect to URL <http://www.ibm.net/explore/wtools>.
- Select the infoMarket Search link.

- Register to use infoMarket Search.
- Search on one or more selectable indexes.

This tool is a simple and very powerful way to search if you know very little about the information you are trying to locate and have only a general idea about where you might find it. The infoMarket Search includes seven indexes, and all can be searched simultaneously.

For quick and general searches of Internet information, use the WebCrawler.

- Connect to <http://webcrawler.com>.
- Enter text to search.

The WebCrawler search engine is simple to use and relatively quick. What gets returned may not always be the best qualified hit list because you can only select from simple "and" and "or" searches. But if you set the number of hits you want to display high enough, you're bound to find what you want.

Use the IBM Internet applications with your own network provider.

- Get the latest version of the IBM Internet software.
- Download the latest SLIP/PPP dialer software from one of these sites:
<ftp://ftp.ibm.net/pub/PPP/PPP.ZIP>.
<ftp://netsplit.phoenix.net/pub/users/vcubed/os2/ppp.zip>.
<ftp://hobbes.nmsu.edu/os2/network/tc-pip/ppp.zip>.
- Unpack the PPP.ZIP file in the \TCPIB\BIN directory and overwrite all

THE I.S. NOTEBOOK

- files with the same names.
- Start the SLIPPM.EXE program.
- Select **Add Entry**.
- Fill in all required fields in the Notebook for Internet provider entries.

The IBM Internet software is constantly being improved and updated. At least once a quarter you can expect to find a new version on one of these sites. The latest version now supports Password Authentication Protocol (PAP) and dynamic IP address assignments, which many regional Internet providers now make use. Check with your provider for any specific instructions for connecting to the Internet using OS/2.

Why would you want to use a non-IBM Internet provider to connect to the Internet? In a word, price. The IBM Global Network connection is pretty economical for an infrequent use

of the Internet (less than five hours a month). But if you find yourself using your Internet connection for around five hours a week, then you'd be better off with one of the many Internet providers you can choose from who offer more hours for a reasonable flat rate. Connecting to other Internet providers requires the use of SLIPPM.EXE. This program works well enough, but you will have to put up with a few inconveniences you wouldn't otherwise—like no automatic redial on a busy signal. There's no doubt that the Internet Access Kit and the IBM Global Network were designed to work well together.

Use an E-mail program other than Ultimedia Mail/2 lite.

- Purchase or download the shareware program PMMail from URL: <ftp://hobbes.nmsu.edu/os2/network/tcpip/pmmail11.zip>
- Install PMMail and set up for use with your specific Internet connection.

PMMail handles E-mail communications more simply and effectively than Ultimedia Mail/2 lite. It isn't the only OS/2 E-mail program you can buy, but it is recommended by a member of the winning Internet Bowl team, Brent Noorda. As with any shareware, please support the publisher by registering your software if you find it useful. ♦

Gordon Scott works as an application programmer and consultant. He is a frequent contributor to OS/2 Professional.

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Product News for the OS/2 User

SCOOPS

Doubleshot Dream Machine

In the wake of Intel's 150 MHz Pentium processor release this week, Diamond Flower Electric Instrument Co. (DFI) has begun shipping its dual Pentium 150 machine dubbed the Doubleshot 150. The system will be preloaded with OS/2 SMP 2.11 (an SMP version of Warp is not yet available).

The idea behind this speed demon is to bring greater power and performance to the workstation and enhance computing-intensive applications such as ColorWorks or complex Mesa spreadsheets.

Said David Rodger, product development manager with Athena Design: "If you're running on a dual processor with OS/2, you could load two monster spreadsheets and do a recalc in two windows, and each can be running on a separate processor. They'll be competing with other system resources and the user interface, but they won't be competing against each other. We think it should work really well—it should be a screamer." Theoretically, any OS/2 application built for multi-threading will be able to take

advantage of the enhanced power and speed offered by the two processors.

The Doubleshot 150 comes with 32MB RAM, 512KB of fast pipeline burst cache, a 1.6GB hard drive, 3.5-inch floppy drive and six-speed CD-ROM.

Its motherboard is a G586-VPM with two ZIF sockets, three PCI slots, three 16-bit ISA slots and one shared PCI/ISA slot. Eight SIMM sockets support up to 512MB of 60ns EDO main memory. DFI has incorporated its own WG-9140P video card for

graphic support; it features a 64-bit Weitek P9100 chipset and offers true-color 64-bit high-performance acceleration with PCI bus-driven high-powered video. The workstation-level board comes with 4MB of VRAM and supports 1600 x 1200 resolution with 64K colors.

The system comes with free lifetime technical support and two-year parts and lifetime labor depot warranty. There also is an optional tiered three-year on-site service package.

New Products

Nothing but smalltalk

VisualAge for Smalltalk Version 3, recently available from IBM, offers new platform and distribution support, object-oriented report writing, expanded database support and new multimedia functions. The client/server programming tool for the Smalltalk language can connect prefabricated, reusable software from a variety of vendors, making object-oriented development easier and more efficient in a heterogeneous

computing environment.

New distributed support features a set of classes and tools for developing distributed applications, offering the flexibility to partition application logic among clients and servers. The product also features faster database access with new parts, multiple concurrent database connections, native Oracle support, complete Open Database Connectivity (ODBC) and expanded IBM Database 2 (DB2) support. Multimedia enhance-

ments include kiosk authoring tools for OS/2 and Windows such as hotspots and scene-to-scene navigation.

Platform support includes OS/2, AIX and Windows 3.11. Windows NT, Windows 95 and UNIX support will be added sometime in 1996. Price is \$1,499 for Standard and \$3,799 for Professional.

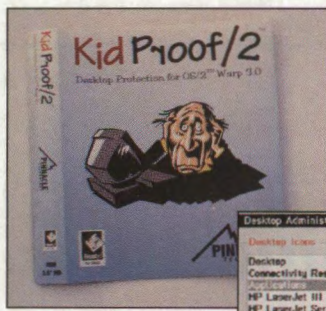
Team spirit

Also recently available from IBM is TeamConnection, a tool that combines an object

repository with software configuration management services to provide a LAN-based client/server development environment.

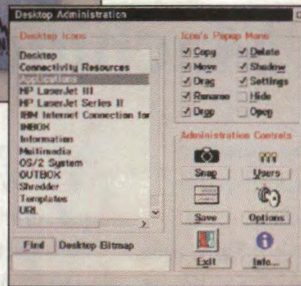
With the tool, developers can share and reuse data, objects and code. TeamConnection is built on Object Design, Inc.'s ObjectStore object-oriented database, which allows its repository to store both coarse- and fine-grained objects such as data elements and logic records. Configuration management

MARKETLINE



Kid-proofed

New from Pinnacle Technology is a desktop security system designed for OS/2 users dubbed Kid Proof/2. The program lets users assign and secure unique OS/2 desktops by essentially taking a picture of a desktop



and providing customization options.

Kid Proof/2 allows users to protect vital applications and data by restricting another user's ability to copy, delete, shred or access the CPrompt. The main user or system administrator also can save a desktop

to file, has full control over restriction options such as the ability to prohibit an icon from being deleted or moved,

and can assign user IDs and passwords. Once created, a customized desktop automatically recreates itself each time that particular user logs on. Kid Proof/2 also supports system-wide protection by prohibiting Ctrl-Alt-Delete resets and inhibiting access to the config.sys file. An optional Internet filter likewise will enable the main user to prevent access to selected news-groups or web sites. Price is \$59.

Pinnacle Technology, Inc., PO Box 128, Kirklin, IN 46050-0128. (317) 279-5157 or (800) 525-1650, fax (317) 278-6414.

support controls access to development data, notifying team members of changes to data and when their help is needed. Version control features preserve application versions at critical points, allowing programmers to modify the application while working with a functioning version of their code.

Interested ISVs also can participate in the vendor enablement program.

TeamConnection is available in server and client versions for OS/2; versions for AIX, Windows and other UNIX platforms are expected to be available mid-1996. Price is \$1,999 per user.

Paradigmatic

Just out in December is an OS/2 version of Paradigm Plus 3.0—a high end, object-oriented Case application development tool from

Platinum Technology (formerly Protosoft). The tool is designed primarily for large Fortune 1,000 companies that compete to get software to market quickly. It supports the six leading OOUI methods and can be updated to support more such methods.

Paradigm Plus 3.0 can be used simultaneously by as many as 50 people as it compartmentalizes each project for others to pull up and reuse, modify or share; it also allows reverse engineering. Its graphical environment fully automates all leading object-oriented methodologies and notations and generates code in C, C++, Ada and Smalltalk as well as RDBMS and ODBMS schema definitions. Pricing starts at \$3,995 for one license.

Platinum Technology, Clearlake Labs, 17629 El Camino Real, Mail Stop 400,

Houston, TX 77058-3051. (713) 480-3233, fax (713) 480-6606.

Rim shot

RimStar Technology, Inc., has just shipped RimStar Programmer's Editor version 4.0, in Professional and Standard Editions. The program is a fully configurable, multi-threaded programmer's editor with a variety of keyboard mapping options for programs migrating from other editors.

New features include: sophisticated project support, file compare, search and replace for files on disk and enhanced configuration/customization features. The Professional edition provides C++ programmers with powerful C++ class and source code browsing capabilities. The editor also provides keystroke macro recording, smart indenting, intelligent paste,

bookmarks and completely configurable keyboard mappings.

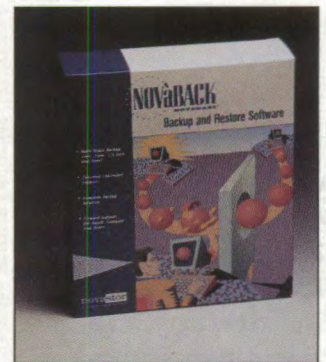
Platform support includes OS/2, Windows 3.1, Windows 95 and NT. Standard Edition list price is \$199; Professional Edition is \$299.

Upgrade prices for current users are \$79 for the Standard Edition and \$129 for the Professional Edition

RimStar Technology, Inc., 91 Halls Mill Road, Newfields, NH 03856. (603) 778-2500, fax (603) 778-2408.

Back to back(up)

NovaStor has just released its oft-delayed Warp backup upgrade: NovaBack OS/2 Warp 3.02. The package offers a completely bootable restoration process, STAC Data Compression, network support, support for extended attributes and the ability to configure new tape drives on the fly.



NovaBack 3.02 supports HPFS, FAT and HPFS 386 file systems; TRAVAN and QIC (80, 3010, 3020 and EC-1000) tapes. Price is \$149; upgrades are \$50. NovaStor Corporation, 80-B West Cochran, Simi Valley, CA 93065. (805) 579-6700, fax (805) 579-6710.

News

Spread the spreadsheets

Athena's new Mesa Spreadsheet for OS/2, version 2.0.4, is addressing users' requests with enhanced keyboard functions that make using the program more efficient, convenient and practical. Mesa also plans to ship its Developer Object Kit (Mesa DOK) first quarter.

New features in Mesa version 2.0.4 include: additional file filters, including Lotus 1-2-3; .WK4 files and Quattro Pro .WB1 files; enhanced keyboard accelerator keys; a script recorder that lets users record actions and automate scripting; and the Formula Builder, which allows formula functions to be inserted directly into the Formula Bar. Display and recalculation speeds also have been improved.

Mesa DOK, in beta at presstime, will allow integration of spreadsheet functionality—from a simple table view to a full-fledged recalculating spreadsheet—into any custom application with as few as 20 lines of code. It supports the creation of two- and three-dimensional matrices of cells, which users can populate with numbers, text, one- or two-dimensional arrays or formulas. The program also supports two-way data transfer from files, real-time data feeds and other I/O devices, as well as file exchanges with other spreadsheet formats such as Excel, 1-2-3 and Quattro Pro.

Mesa 2.0.4 is available to

registered users at these ftp sites: <ftp://ftp.athena.com/pub/Mesa2/mesa204.zip> and <ftp://ftp-os2.nmsu.edu/os2/demos/mesa204.zip>. It's also available on CompuServe through the OS2AVEN forum, through America Online and the OS/2 Shareware BBS at (703) 385-4325. List price for new customers is \$95.

An unsupported preview version of Mesa DOK for OS/2 can be obtained at <ftp://ftp.athena.com/>.

Athena Design, Inc., 332 Congress Street, Boston, MA 02210. (617) 426-6372; fax (617) 426-7665. E-mail info@athena.com.

Call me mister

If finding files in your directories appeals to you as much as cleaning out your kitchen junk drawer, you might want to visit an ftp site for a new shareware file manager called Mr. File/PM. Created by

IBM employee Mark Kaczmariski, Mr. File/PM is a file manager for OS/2 versions 2.0 and higher that allows users to display and sort files by extension, filename, date and size. It can display the complete directory tree for the current drive or just certain files within a subdirectory. The size of your drive and directory or selected files can be shown dynamically as you navigate between directories and drives. Mr. File/PM also allows you to modify file and directory attributes.

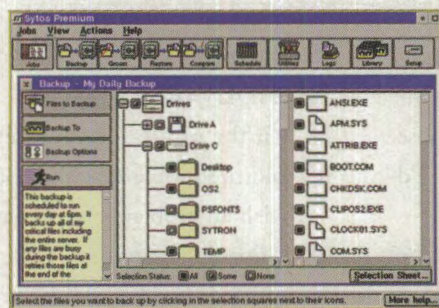
Mr. File/PM can be found at <ftp://hobbes.nmsu.edu/os2/diskutil/mrfilepm.zip>.

Back Again/2

After months of negotiation, Computer Data Strategies' BackAgain/2 is now available as a bundled application with Conner IDE 2/4GB tape drives. With standard disk configurations now shipping with

1 GB or more, older mini-cartridge systems tend to be outdated almost as quickly as they hit the market. With a suggested retail price of \$399, the new Conner CTM4000R bundle seems poised to set a new standard for quick, economical and reliable backup of newer systems. Users will appreciate the fact that they can schedule a complete system backup without swapping tapes. Conner also manufactures the drive (the CTM3200 series) in both internal and external SCSI interface units, making it suitable for high-end corporate workstations and small servers.

The bundle is available from Conner Peripherals, 36 Skyline Drive, Lake Mary, FL 32746. (407) 263-3500, fax (407) 263-3555. Computer Data Strategies, P.O. Box 25123, Woodbury, MN 55125. (612) 730-4156, fax (612) 730-4161.



Arcada backups

Arcada Software this month introduces Arcada Backup for Warp, designed to complement Sytos Premium. Aimed at the standalone desktop

markets, the product comes in a personal edition, primarily for minicartridge use, and a professional workstation version that supports both minicartridge and SCSI devices.

Arcada Backup for Warp offers full integration with OS/2's Workplace Shell, allowing drag-and-drop backup, restore, scheduling and printing. Its "Restore Assis-

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Waiting for PrintScreen

BY JERRY POURNELLE

Now it's a waiting game. The Windows 95 launch has come and gone. Win 95 is selling better than some expected, and not as well as others hoped. Windows NT crawls forward, slowed because apparently every competent warm body at Microsoft is staffing tech support lines. MSN works when you can get on, but sometimes that takes a dozen tries.

Meanwhile IBM has an "official" solution to the Windows 95 problem: around year's end DevCon 9 (the Developer's Connection for OS/2, Volume 9) will release some 700 API's for the most popular functions used by major software.

What this means is that a developer can recompile using these API's and end up with 32-bit code that will run on Windows 95, Windows NT and OS/2. Clearly you won't be able to use the Win 95 Registry, or some of the NT security features, but these "broad-based" applications will be able to do just about everything that full Windows 95 applications can do.

Applications developers must update from Windows 3.11 to Win 95 anyway; if they choose to go with the IBM API set, they'll be able to sell to the OS/2 market and to Windows 95 and NT users. It would also be possible to put out an "OS/2" version of a program already converted to Windows 95. Whether software developers and publishers will choose to use these API's is something we'll just have to wait to see. I'd like to see it happen, but I wouldn't bet much on it.

Meanwhile, my OS/2 adventures continue. We use Valiant, the Value Point Pentium running OS/2, for communications because it's very reliable. Moreover, while Windows 95 will run Procomm 2 for DOS and even use Z-modem to upload files, nothing I can do will get Windows 95 to let Procomm2 download with z-modem; for that I have to go to the OS/2 machine, which does it just fine (as did Windows 3.11). Since OS/2 is reliable and mul-

titasks, we also use Valiant as the network print server.

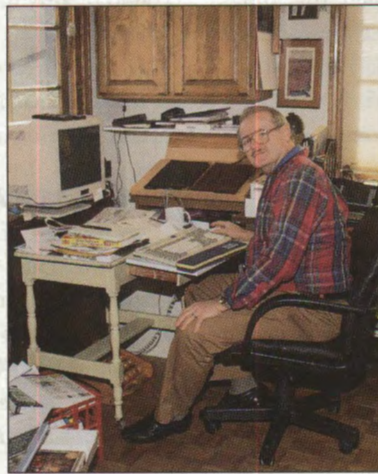
The other day I was online with the Windows 95 system and received a message I wanted Alex, my son, to work on, so I hit Shift-PrintScreen and went on about my business. That sent the message over the Ethernet to Valiant to be printed. An hour later I went over to Valiant to let him get my MCI mail, and I got a horrible surprise. It was as if someone had poured glue into the machine. It took 45 seconds to open the MCI mail grabber program and once the program was open it took two minutes to initialize. There were a lot of windows open, so I began closing them; and it took up to a minute simply to close an inactive window. We're talking slow.

About then I noticed that the printer was out of paper. When I fixed that, my PrintScreen job started up, and Valiant was his old, crispy self again.

There's a documented explanation and fix for the problem I experienced: the default setting in OS/2 continues polling the print device until you get a satisfactory answer. To change this default, edit your CONFIG.SYS. Find

the statement `BASEDEV =PRINT01.SYS`. Make that read `BASEDEV=PRINT01.SYS /IRQ` and reboot the system. Now if the printer says it's out of paper, OS/2 will wait until it's told the problem is fixed before thinking about it again.

I wish all problems were that easy to fix. Now I need a good OS/2 document comparison program that will look at two versions of a document, show me the changes, and let me build a copy incorporating only the changes I like. I can do that in Microsoft Word 6, but I'm afraid Microsoft will "upgrade" Word to Win 95, and I'm quite sure when they do, they won't put out an OS/2 version. ♦



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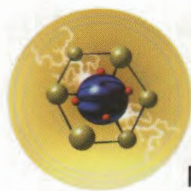
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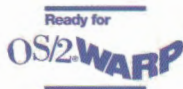
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